CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

ENERGY EFFICIENCY COMMITTEE

JOINT COMMITTEE WORKSHOP

INFORMAL PROCEEDINGS AND PREPARATION OF THE

2003 INTEGRATED ENERGY POLICY REPORT

Docket No. 02-IEP-01

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

TUESDAY, AUGUST 26, 2003 9:40 a.m.

Reported by

Peter Petty

Contract No. 150-01-005

ii

APPEARANCES

COMMITTEE MEMBERS PRESENT

James D. Boyd, Commissioner, Presiding Member
William J. Keese, Commissioner, Associate Member
John L. Geesman, Commissioner

STAFF PRESENT

Rick Buckingham, Advisor to Commissioner Keese Melissa Jones, Advisor to Commissioner Geesman Susan Bakker, Advisor to Commissioner Boyd Al Alvarado, Project Manager

David Vidaver

Judy Grau

Don Kondoleon, Transmission Program Manager

ALSO PRESENT

Les Guliasi, PG&E

Alvin Pak, Sempra Energy

Joe Sparano, WSPA

Gary Schoonyan, Southern California Edison

Kent Hampton, Marathon

Steven Kelly, IEP

Lorenzo Kristov, California ISO

Joseph Kloberdanz, Southern California Edison

Barry Flynn, Flynn RCI

iii

A P P E A R A N C E S (continued)

ALSO PRESENT

Mohamed J. Beshir, LADWP

Eric Eisenman, PG&E

Mark J. Skowronski, Solargenix Energy

iv

INDEX

	Page
Proceedings	1
Opening Comments, Commissioner Boyd	1
Introduction and Purpose	1
Staff presentation of findings and conclusions of Electricity and Natural Gas Assessment Report	8
Comments by State Agencies	32
Public comments and presentations on electricity issues	33
Staff presentation on transmission update report	131
Public comment on transmission issues	146
Closing Comments	187
Adjournment Reporter's Certificate	188 189

-	1	\Box	R	\cap	\sim	177	177			T/T		C
	l .	Р.	ĸ	()	ι.	P.	r.	1)	- 1	IVI	(-	\sim

2	CHATDMAN	DUAD.	T ! 770	1 0+	+ho	customary	,
_	CHAIRMAN	BUID:	T . AG	Tet	LIIE	Customat V	/

- 3 ten minutes go by for late arrivers, including my
- 4 Associate Member of the Committee, Chairman Keese,
- 5 who had a little plumbing dilemma at his residency
- 6 this morning. So he'll be here momentarily.
- 7 We're going to go ahead and not keep you waiting
- 8 any longer.
- 9 Welcome to all of you to another in our
- 10 continuing series of what have been public
- 11 workshops and public hearings, leading us to the
- 12 preparation of the Commission's Integrated Energy
- 13 Policy Report, which is due to the Legislature by
- 14 this November.
- Today's Committee Hearing is on
- 16 electricity and natural gas assessment, the draft
- 17 report by the staff of the Commission. For those
- of you who can't see, the long distance up here,
- 19 the placard, I'm Jim Boyd, I'm Chairman of this
- 20 Sub-Committee of the Commission on the Integrated
- 21 Energy Policy Report, the Presiding Member.
- 22 And as I indicated, the Associate Member
- 23 is Chairman Keese, who will be with us shortly.
- 24 Also with us today, and very welcome, is
- 25 Commissioner Geesman, who sits with me on some of

1 our committees, and sits on a number of others

- 2 that are very relevant to this subject. So I
- 3 welcome the Commissioner and his interest in this
- 4 subject.
- 5 Also, on my left, my Advisor, Susan
- 6 Bakker. On my immediate right, Rick Buckingham,
- 7 the Advisor to the Chairman. And on Commissioner
- 8 Geesman's right, Melissa Jones, his Advisor. We'd
- 9 all like to welcome you here to this hearing.
- Today's hearing, right now we begin what
- is noticed as a possibly or definitely a two-day
- 12 review of the staff's draft of Electricity and
- 13 Natural Gas Assessment Report. This Report was
- posted to the CEC's website on August 8th.
- 15 Printed copies have been available, and
- 16 printed copies are available on the table in the
- 17 lobby, including all the subsidiary reports,
- 18 which, as I weigh it and measure it, is very bulky
- 19 and very large.
- 20 And if you put it all in one binder, as
- 21 my secretary did, it's heavy to carry around. In
- 22 any event, the material is all there should you
- 23 like it, and if you don't like it leave it there
- 24 at the end of the day, we'll use it for something
- 25 else.

1 The subsidiary reports include the

- following, what we call outlook reports, on energy
- 3 demand, retail electricity prices, comparative
- 4 costs for new central station generation. We have
- 5 assessment reports, assessments of the natural gas
- 6 market, the transmission system, and the state's
- 7 gas-fired generating plants.
- 8 We have a proposal on resource adequacy
- 9 requirements, and also the 2003 Environmental
- 10 Performance Report. So there are a host of
- 11 reports, as I indicated.
- 12 Last week, as many of you know, we held
- 13 a hearing, this Committee did, on transportation
- 14 fuels. And day after tomorrow, this Thursday,
- 15 we'll have a public hearing on what we call the
- 16 Public Interest Energy Strategy Report. So over
- 17 the course of these two weeks we will have held
- hearings on all the main reports that will
- 19 comprise the Integrated Energy Policy Report.
- The purpose of today's hearing is to
- 21 receive public inputs, public comments that the
- 22 Committee and the Commissioners will take under
- 23 consideration, which will assist the Committee in
- 24 formulating and developing policy on electricity
- 25 and natural gas infrastructure and policy issues.

1 These policy recommendations will go

- 2 into the final Integrated Energy Policy report, as
- 3 indicated earlier due to the Governor in November
- 4 of this year. And after that, the Governor then
- 5 has the opportunity to review, comment, and
- 6 ultimately forward the report to the Legislature.
- 7 The Committee today is interested in
- 8 comments on the major findings in the Electricity
- 9 and Natural Gas Report, and in your suggested
- 10 options for addressing electricity and natural gas
- 11 problems.
- 12 And I am aware that a series of
- 13 questions were distributed and posted on the
- 14 website to try to give all of you an idea of what
- 15 kind of information we were looking for, to give
- 16 you some guidance on the issues we'd like to have
- 17 some input on.
- 18 I'd like to keep this forum as informal
- 19 as possible, despite the very formal setting that
- 20 the permanent structure of this room forces on us
- 21 sometimes. And the few requirements that we have
- 22 to help us facilitate clear communication for
- 23 everyone here, and others listening to the audio
- 24 webcast -- and I did want to point out, these
- 25 proceedings are audio webcast.

1 So there will be some instructions about

- 2 using microphones and so on and so forth. Staff
- 3 will be making a brief presentation, summarizing
- 4 the Electricity and Natural Gas Report, and after
- 5 that we'll open things up to the audience for
- 6 comments, questions, any other presentations that
- 7 folks might want to make.
- 8 If you would like to speak we ask that
- 9 you fill out a blue card -- and I don't have a
- sample here to show you, but there are blue cards
- on the table in the back of the room, the standard
- 12 practice of the Commission. And leave these cards
- on the desk, which will be collected and sent up
- 14 here to us, so we can call on you at the
- 15 appropriate time.
- We ask that each speaker please step up
- 17 to the microphone, begin by stating your name and
- 18 affiliation. Later on, if you have a business
- 19 card, that will help our transcriber spell your
- 20 name and your affiliation correctly, if you would
- 21 provide him a copy.
- We are tape-recording the dialogue
- 23 today, partly to create a record of our work, and
- 24 primarily to capture comments, evaluations, ideas
- 25 and suggestions to help us with these proceedings.

1 Today, as I indicated, we will focus

- 2 primarily on electricity and transmission issues.
- 3 Tomorrow we probably will drift over more into the
- 4 natural gas area, but we have not posted a
- 5 specific agenda, other than making one available
- 6 today relative to this hearing. So we will hear
- 7 from everybody who wants to testify today.
- No matter when we get done today, we
- 9 will be here tomorrow, because we posted a hearing
- 10 for tomorrow, so we will have to at least open a
- 11 hearing, and anyone who couldn't make it today
- 12 will be available tomorrow to provide testimony.
- Depending on the number of cards, and
- 14 how much testimony we get, will determine how long
- 15 we will go today. We've set aside the day, but it
- 16 could be a shorter day.
- I would like to take this opportunity
- 18 for the Committee to acknowledge that over the
- 19 course of these days, weeks, and months now, we've
- 20 received a lot of input, and we appreciate very
- 21 much that a great deal of public input and a great
- deal of public involvement has already occurred.
- 23 A lot of your time has been invested in
- 24 the material that the staff utilized for the draft
- 25 reports that we're hearing about in the course of

```
1 the hearings last week and this week.
```

- 2 From February through July 13 workshops
- 3 have been held, most of which addressed the topics
- 4 that are included in the Electricity and Natural
- 5 Gas Report. And I'm speaking specifically of
- 6 these two subjects.
- 7 And again, I'd say, as we go through the
- 8 day, we are anxious that you share with us your
- 9 comments on the concerns that are important to
- 10 you, or that you feel are important to the state.
- 11 Again, I'll make reference to the 21 questions
- 12 related to this report which the staff has
- 13 generated and which I know are on the back table.
- 14 And with that, Commissioner Keese not
- 15 being here, I can't turn to him for any comments,
- 16 so Commissioner Geesman, if there is anything
- 17 you'd like to say now would be an appropriate
- 18 time?
- 19 COMMISSIONER GEESMAN: No thank you,
- 20 Commissioner.
- 21 COMMISSIONER BOYD: Thank you. Well,
- 22 with that then I'd like to introduce Al Alvarado,
- 23 who's standing at the dais over there. He's the
- 24 Project Manager for this Electricity and Natural
- 25 Gas Assessment Report. And Al will take over and

- 1 provide the staff presentation.
- 2 MR. ALVARADO: Thank you, Commissioner.
- 3 I'll get the right setting here. My name is Al
- 4 Alvarado, I am the Project Manager of this draft
- 5 Electricity and Natural Gas Assessment Report.
- 6 I've had the privilege of working with a good
- 7 number of staff in preparation of this draft
- 8 report, as well as the many supporting technical
- 9 staff reports that are also up in front.
- 10 We have over about 1,100 pages in that
- 11 stack of reports, so I only plan on hitting some
- of the highlights that was presented in the draft
- 13 report. I'm assuming most of you have already
- 14 read all that material.
- 15 I'm going to just touch on the focus of
- 16 the report, a little bit about the integrated
- 17 nature of both electricity and natural gas
- 18 systems, a little bit of the demand outlook, which
- 19 sort of sets the foundation for conducting the
- 20 rest of our supply adequacy evaluations. Our
- 21 supply adequacy outlook, and some of the
- 22 infrastructure implications.
- The focus of the report, as specified by
- 24 Senate Bill 1389, asked the Commission to cover a
- 25 number of different areas. In this report we're

1 to provide an overview of major energy trends and

- 2 issues facing California.
- This includes the supply, demand, price,
- 4 reliability issues, and efficiency. We are also
- 5 to assess the impacts of these trends and issues
- on public health and safety, the economy, the menu
- 7 of resources available to California as well as
- 8 the implications to the environment.
- 9 Related to the environment, there is a
- 10 specific section calling for an assessment of the
- 11 environmental performance of the electric
- 12 generation facilities in the state.
- We're also to identify the potential
- 14 problems or uncertainties associated with
- 15 electricity and natural gas markets.
- 16 So the report provides the findings of
- 17 expected energy infrastructure developments, and
- 18 analysis of the implications that a number of
- 19 these important uncertainties may present.
- 20 The goals of the report, then, is to
- 21 identify those key factors that may stress the
- 22 energy infrastructure. We're also to determine if
- 23 there may be a need for any additional development
- 24 so we can mitigate the potential supply shortfalls
- 25 in the next decade.

1 And considering that electricity

- 2 generation is the largest user of future natural
- 3 gas demand, our studies focus on the potential
- 4 stresses to the natural gas fuel system.
- 5 And to support all this analysis
- 6 Commissioner Boyd had sort of listed out the many
- 7 different reports that feed into our analysis,
- 8 ranging from the Environmental Performance Report
- 9 down to a study on aging natural gas power plants
- in California, to try and give you a framework of
- 11 understanding potential retirement concerns.
- 12 When we talk about integrated energy
- 13 markets we're finding that the growing role of
- 14 natural gas as the fuel of choice for electric
- 15 generation has implications on how the natural gas
- 16 system operates, and the question is regarding the
- gas infrastructure, how it must be designed and
- 18 operated for the future.
- 19 Both markets exist to serve our
- 20 population and economy, so they are affected by
- 21 the same economics, weather, new technologies and
- 22 economic growth.
- 23 Common markets mean that risks and
- 24 uncertainties are also linked, so these risks
- 25 include risks associated with natural

developments, with physical supply, the demand

- 2 growth, any temperature variations that will
- 3 affect demand, and any of the weather variations.
- 4 They also include the human aspects like
- 5 market design, regulatory uncertainty and social
- 6 preferences on how to mitigate these risks. Also,
- 7 any decisions for one element of the market will
- 8 also have an integrated consequence in the other.
- 9 For example, a decision to add natural
- 10 gas storage can affect what consumers will pay for
- 11 electricity. Conversely, the development of
- 12 renewable generation or electricity demand
- 13 reductions can influence the demand foreign price
- 14 of natural gas.
- On energy demand trends, a reliable
- 16 assessment of the amount, location, and timing of
- demand growth is essential to evaluate the options
- that can best target California's energy needs.
- 19 What we're finding is, over the next
- 20 decade we're expecting that California will add
- 21 about five million people to its current
- 22 population of about 35 million.
- 23 Three-quarters of electricity growth is
- 24 expected -- as well as all of our natural gas
- 25 growth -- will be driven primarily by the need to

- 1 serve these new citizens.
- 2 Commercial growth, which is spurred by
- 3 the state economic expansion, will be the largest
- 4 user of incremental electricity. Given these
- 5 population trends, this sort of translates into
- 6 approximately 10,000 megawatts, which includes
- 7 reserves of generation or demand reducing
- 8 resources that will be needed to serve this growth
- 9 in the state economy.
- 10 I'm not saying that this is how much new
- 11 generation we need, since we already at this point
- 12 have a surplus of generation capacity. 80 percent
- of the residential energy growth is from adding
- 14 new homes, and only 20 percent of the growth is
- 15 caused by new end uses.
- 16 Three-fourths of the commercial demand
- growth is due to business expansion, which
- 18 translates into more floor space used by
- 19 businesses. And about one-fourth reflects greater
- 20 per unit energy use.
- 21 Regarding the industrial sector,
- 22 improved productivity has led to greater
- 23 electricity use per employee, such that the
- 24 contributions of the manufacturing to the gross
- 25 state product grew twice as fast as the commercial

- 1 sector.
- 2 Just setting the highlights here, I mean
- 3 we have one whole report that does talk about our
- 4 demand growth trends for each of the sectors, and
- 5 sort of gives you much of the specifics of these
- 6 points.
- 7 A final point, too is that California
- 8 uses electricity far more efficiently than other
- 9 western states and the U.S. as a whole, as shown
- 10 in this slide, where we compare the per capita
- 11 electricity used for California, western United
- 12 States minus California, as well as the U.S.
- 13 The horizontal -- the vertical bars that
- 14 we have over here just sort of reflects the
- downturn in the state economy, just so you can
- 16 note a few trends where demand has declined during
- 17 some of these periods.
- 18 But for the most part, the per capita
- 19 used for electricity has been rather steady over
- 20 the years.
- 21 This chart shows our, not only just the
- 22 historical snapshot of electricity consumption,
- 23 but also contains our electricity demand forecast.
- 24 And we've developed three different
- 25 scenarios, the base case scenario, which is the

1 blue line with the diamonds reflects our general

- 2 assumptions of the eventual rebound of the
- 3 economy.
- 4 The purple bar up on top is our high
- 5 demand, where we're expecting an advanced,
- 6 accelerated rebound economy, and then we have our
- 7 lower growth demand scenario.
- 8 Historically, annual growth electricity
- 9 consumption in non-recession years has averaged
- 10 about 2.8 percent. The base case forecast between
- 2003 and 2008 is about 1.4 percent. The high
- economic growth scenario between 2003 and 2008
- increases at 2.7 percent, which is typical in
- 14 post-recession periods.
- This chart just generally shows the
- 16 annual percentage change in electricity sales. It
- just shows that it's not exactly a steady increase
- 18 from year to year, but it sure has fluctuated up
- 19 and down. The outline bars shows the annual
- 20 percentage change for each of the years, our
- 21 forecasted years.
- 22 Another thing to note about demand,
- 23 particularly in the west and in California, is
- 24 that demand definitely varies by day as well as by
- 25 season. This is just a typical pattern of daily

- 1 peak demand for one whole year.
- 2 The narrow band in-between the chart
- 3 there is a summer sample. I believe this might be
- 4 2001 peak fluctuations. What's notable out of
- 5 this chart is that electricity use varies wildly
- from time of day and time of year.
- 7 In a typical day use increases 60
- 8 percent from the early morning low to afternoon
- 9 high. And when we get into the summer months this
- 10 swing is as much as 85 to 90 percent. The peak
- 11 electricity demand needles up in the summer due
- 12 mostly to air conditioning loads.
- 13 Another notable aspect about
- 14 California's demand patterns is what happens from
- 15 year to year, depending on temperature variations.
- 16 This chart shows historical peak demand over the
- 17 previous years, but also includes our demand
- 18 forecast, taking different probabilities of
- 19 temperature variations.
- 20 So the blue bar represents a typical
- 21 average year, one of two probability. The cross
- 22 hatch bars is, you know, if you have a hotter than
- 23 average year, one in five probability. One in
- ten, a very hot year, and then one in 40,
- 25 definitely quite a bit hotter.

1 What we're finding is that the demand

- 2 difference between a average summer day and the
- 3 probability of a one in ten hotter peak day is
- 4 about 6.1 percent. This difference is over three
- 5 times the amount of new demand added each year.
- 6 So I think it's a significant
- 7 uncertainly and risk that we must factor in when
- 8 we do our resource evaluations.
- 9 This variable load requires a generation
- 10 system that is, the bottom line is that we need an
- 11 extremely flexible system to be able to
- 12 accommodate these types of demand fluctuations
- that occur from year to year as well as day by
- 14 day.
- 15 Regarding natural gas demand. Natural
- gas demand growth is actually a lot slower than
- 17 electricity, mostly because there's not many new
- 18 uses of natural gas. Furthermore, energy
- 19 efficiency in new homes and gas appliances have
- 20 really improved over the years.
- 21 Industry is a heavy user of natural gas,
- 22 but those industries that use natural gas are not
- 23 really expanding in California, at least we're not
- 24 expecting it to expand. Total California gas
- demand then, overall, will grow about eight

- 1 percent between 2003 and 2010.
- 2 Three-fifths of this increase will come
- 3 from power generation. This is the point I was
- 4 trying to make earlier, about how integrated the
- 5 gas and electricity system really is.
- 6 If electricity generation gas use were
- 7 to be held constant at the 2003 level we'd find
- 8 the demand for natural gas over the state would
- 9 only grow at four percent. So, following the
- 10 trend for electric generation, that's pretty
- important for our long-term outlook for both
- 12 electricity and the gas infrastructure.
- Now, getting to our current market
- 14 situation. Over the last several years quite a
- 15 bit of new generation has been developed in
- 16 California. Between 2000 and 2002 we saw about
- 17 almost 5,500 megawatts of new generation located
- in California in just 2003 alone, over 4,100
- 19 megawatts of new generation.
- This trend is not only just in
- 21 California, but we're finding the same thing has
- 22 occurred throughout the whole western United
- 23 States. The 6,600 megawatts of new generation
- 24 additions throughout the west does not include the
- 25 California editions.

1 So we're finding that reserve margins

- 2 have increased significantly throughout the whole
- 3 west. I think the levels are similar to what we
- 4 had back in the 80's.
- 5 Given all this new generation
- 6 development, we did a short-term assessment on the
- 7 supply adequacy of the generating system. This
- 8 chart includes our outlook for the available
- 9 generation. This already factors in expected
- 10 forced outages. We also include firm contracts,
- 11 the net additions you'll find.
- 12 Like in 2004 there's a negative as well
- as in 2006. This is sort of net after we also
- include retirements on top of some of the new
- 15 additions.
- 16 If we take an average summer demand
- 17 trend in these early years we see that we have
- 18 pretty healthy project operating reserves all the
- 19 way out to 2008, but if we consider the
- 20 uncertainty and probability of a hotter summer,
- 21 we'll see that, let's say in 2006 we have a six
- 22 percent operating reserve, just inching slightly
- 23 below the seven percent minimum operating
- 24 criteria.
- 25 2007, 2008, this sort of infers that

1 we're approaching a need for new generation in

- 2 California or load management type of programs to
- 3 try to keep our supply adequacy in balance.
- In addition to your statewide outlook,
- 5 we also find that there are local liability
- 6 concerns. Both San Diego and San Francisco
- 7 Peninsula have reliability problems. Both areas
- 8 are characterized by limited generation within
- 9 their electrical boundary, limited by transmission
- 10 capacity to access resources outside of those
- 11 boundaries.
- 12 For San Diego there is a need for at
- 13 least 100 megawatts of new capacity by 2006, and
- 14 another additional 100 megawatts in 2007. For San
- 15 Francisco there is also going to be a need for new
- 16 generation or transmission upgrade through 2006.
- 17 As for the natural gas outlook, over the
- 18 past three years pipeline expansions and additions
- 19 have made pipeline capacity sufficient to serve
- 20 California's needs through 2006. Beyond this date
- 21 annual average capacity is adequate, but there is
- 22 a concern related to the peak day conditions that
- 23 could require further expansion.
- 24 Another area of concern is increase in
- 25 gas demand in Arizona and New Mexico could absorb

1 a significant amount of the gas that could have

- 2 otherwise been delivered to serve southern
- 3 California.
- 4 There's also natural gas storage
- 5 concerns that could add a degree of vulnerability
- 6 to the system. This vulnerability is due to what
- 7 were -- typically in the past natural gas used to
- 8 peak during the winter time to serve our heating
- 9 loads. Now, with the increase of natural gas-
- 10 fired generation there is increasing demand for
- 11 natural gas during the summer.
- 12 So gas that was typically stored
- 13 throughout parts of the year in order to save up
- 14 for the winter heating system is now being
- diverted to meet the gas demand during the summer.
- So these two seasonal peaks challenges
- 17 the industry and its ability to ensure a reliable
- 18 supply throughout the year. I think it's just one
- of the issues that we need to highlight and keep
- 20 watch over.
- 21 As for environmental performance, most
- of the findings are found in the 2003
- 23 Environmental Performance Report. There is a
- 24 general trend of improved system performance.
- 25 There is significant regional generation sector

1 and environmental impacts that we do see will

- 2 continue.
- 3 Air emissions -- we find that there is a
- 4 significant decline in air emissions in a region-
- 5 wide basis. I know that there are still some
- 6 local concerns that we need to pay attention to.
- 7 Water and aquatic habitats impacts also
- 8 continue to be a concern. Biological resource
- 9 impacts will vary by sector. And one of the
- 10 findings in the Environmental Performance Report
- is, despite the increase of natural gas use during
- 12 the crisis, it did increase emissions, but it did
- 13 not cause any major environmental health effects.
- 14 The Environmental Performance Report
- 15 also talks about tradeoffs. And these tradeoffs
- are basically trying to look at the balance
- 17 between human health effects versus the ecology
- and societal preferences of the resource
- 19 selections versus cost.
- This is sort of the vision we're going
- 21 to take in evaluating risk analysis. For example,
- from the hydro system there are no emissions. It
- 23 provides low cost power. However, there is
- 24 concerns regarding the damage to water sheds.
- On coastal repowering, we're talking

- 1 about low emissions, re-use of the existing
- 2 infrastructure, but there are cooling impacts, and
- 3 the usual visual aesthetic concerns too.
- 4 Transmission links to regional energy
- 5 resources does impact communities and biological
- 6 resources. Questions regarding imports, are there
- 7 any regional inequities. Questions concerning the
- 8 environmental impacts associated with the
- 9 generation located out of state.
- 10 So, we didn't get into the choices of
- 11 the future. We're finding that, with the supply
- 12 adequacy outlook, things are okay for the next
- 13 several years, but we do need to take a forward
- 14 look.
- 15 California now has time to fashion its
- 16 basic infrastructure in ways that will meet
- 17 multiple public interests.
- We're finding that, if we don't have an
- 19 energy policy to guarantee resource adequacy, you
- 20 know, we may once again confront the types of high
- 21 prices and outages, by 2007, that did occur in the
- 22 past several years.
- 23 Given the lags in bringing new
- 24 generation and transmission resources online, or
- 25 building up demand reductions by changing consumer

1 investments, this acquisition of additional

- 2 resources should commence by 2004.
- 3 We're just suggesting that we really
- 4 ought to sort of brace down and come up with a
- 5 good plan to be able to address our long-term
- 6 resource concerns.
- 7 In the report we highlighted a number of
- 8 different policy areas to watch. So, meeting our
- 9 resource needs requires dependable construction
- 10 and operation of thermal plants. We're also
- 11 talking about consideration of renewable
- 12 generation, as well as demand side management
- 13 programs.
- One of the other IEPR supporting
- 15 reports, the Public Interest Energy Strategies
- 16 Report, does cover a lot of the renewable as well
- 17 as demand side management programs. It tries to
- 18 list the factors that will go into consideration
- of those possible options for meeting our future
- 20 resource needs.
- 21 There are also several proceedings and
- 22 activities underway to restore electricity
- 23 infrastructure. This is occurring at some of the
- other state agencies, such as the PUC and the
- 25 Resource Procurement Proceeding, and activities at

- 1 the Independent System Operator were suggesting
- 2 that we really ought to keep an eye in seeing how
- 3 this progresses.
- 4 You know, it holds a lot of promise for
- 5 bringing in a lot of preferred renewable and
- 6 demand-side management programs. Depending on
- 7 this progress then we can see what really will be
- 8 needed to make up the rest of the deficit for this
- 9 system.
- 10 So uncertainly in power plant long-term
- 11 contracts, financing, permitting, construction,
- 12 uncertainties in demand-side management program
- development, implementation impacts, all of this
- must be analyzed and be accounted for ahead of
- 15 time.
- I think, having been here in this
- 17 Commission for a long time, working on past
- 18 electricity reports, I sort of approach this from
- 19 our old resource planning perspective of trying to
- look forward to figure out really what is needed,
- 21 what are the uncertainties and risks associated
- 22 with all these options.
- Other policy areas to watch is
- 24 retirements. I know there's been many questions
- 25 brought up about concerns of retirements. There's

1 so much uncertainly there. We are taking a look

- 2 at some of these older facilities.
- 3 We find some of these facilities are
- 4 located in local reliability areas. So they are
- 5 needed, and will likely continue to operate until
- 6 there are some replacements, but still that
- 7 remains one of the uncertainties that we need to
- 8 consider in our analysis.
- 9 Future transmission planning and
- 10 permitting. Must ensure that the transmission
- 11 system is upgraded while protecting local quality
- of life. Later on today we'll have a discussion
- on transmission and we'll also have a staff
- 14 presentation on some of our findings in our
- 15 transmission report.
- 16 We talked already about natural gas
- 17 concerns. Not only are we talking about expanding
- 18 overall supply whether it's by pipeline. I know
- 19 that there's LNG proposals out there too that can
- 20 help our overall supply situation, but we also
- 21 must look at source needs to address the double
- 22 peak problem.
- 23 Environmental impacts is always going to
- 24 remain an area of concern. We'll be looking at
- 25 the potential impacts of not just the existing

1 system, but also associated with new transmission

- lines, natural gas pipelines, and other generation
- 3 projects.
- With that, that is my quick recap of
- 5 what's included in the staff draft, which is the
- 6 Natural Gas Assessment Report. Those reports do
- 7 cover a whole host of different areas. We get
- 8 into our price forecasts for electricity and
- 9 natural gas projections on electricity retail
- 10 rates too.
- I didn't think I'd really get into the
- 12 detail there, I'm assuming most of you already are
- 13 quite familiar with our work there. With that,
- 14 I'm open for any general questions. I do have a
- 15 lot of my supporting troops over here if there are
- 16 any particular questions that I really can't
- 17 answer.
- 18 COMMISSIONER BOYD: Any questions from
- 19 folks at the dais here?
- 20 COMMISSIONER GEESMAN: I have one. In
- 21 the report itself you indicate the enormous swing
- of hydro and its impact in California, from a high
- of 45 percent in 1983 to a low of 12 percent in
- 24 2001. And I presume those percentages are in
- 25 terms of gigawatt hours of energy.

1 Could you explain the approach that

- 2 you've taken in terms of modeling for hydro
- 3 variation, and what the rationale for the approach
- 4 you've taken is?
- 5 MR. ALVARADO: I'll defer to our
- 6 resource planning expert.
- 7 MR. VIDAVER: Oh, thank you. David
- 8 Vidaver, V-i-d-a-v-e-r, Energy Commission staff.
- 9 I'll limit my discussion to California hydro
- 10 values, the procedure for using modeling in the
- 11 northwest is pretty much the same.
- We have 25 years of hydro data that is
- distributed by powerhouse by month. We use median
- 14 values for each of these hydro plants in
- 15 California for each month, and then if necessary
- true those up to come up with an accurate or an
- 17 annual total that matches the median annual total
- 18 over the 25-year period.
- The model itself dispatches the hydro
- 20 energy in one of two ways, depending on whether
- 21 the facility has pondage or is simply limited to
- 22 run a river. Run a river is simply distributed
- evenly.
- 24 The gigawatt hours that the plant are
- 25 capable of generating are divided by 744 or 720

depending on the month, so there's an equal amount

- of output over every hour of the month.
- 3 For facilities with pondage, historic
- 4 data is used by the vendor who supplies us the
- 5 software that we use. They tell us what share of
- 6 the energy generated each month by a specific
- 7 power plant is run a river.
- 8 And that share of energy is allocated
- 9 equally over all hours of the month. The
- 10 remaining energy is dispatched according to
- 11 California loads. It's a peak shaving technique.
- 12 All power plants generate the pondage
- 13 portion of their energy during the peak hour until
- 14 such time that it is no longer the peak hour. The
- 15 residual demand is equal to that which exists in
- 16 another hour, and then the energy is generated by
- 17 the peaking plants over those two hours until a
- 18 third hour comes into play.
- 19 So finally all the dispatchable hydro
- 20 energy is generated in such a way as to levelize
- 21 peak loads across that month.
- 22 COMMISSIONER GEESMAN: Did you construct
- 23 an adverse hydro scenario?
- 24 MR. VIDAVER: For the Electricity and
- 25 Natural Gas Report I believe we constructed an

- 1 adverse scenario in which the hydro, the total
- 2 hydro energy produced in the WEEC was on a I
- 3 believe one in 15 year basis, roughly corresponded
- 4 to 1992.
- 5 So we took the -- I believe it was 1992,
- 6 I can't swear to it -- we took the actual hydro
- 7 generation, both in California and the northwest
- 8 in 1992 and pushed that through the model.
- 9 COMMISSIONER GEESMAN: And did you
- 10 publish those results? I don't see that in the
- 11 report.
- MR. VIDAVER: I believe it's in one of
- 13 the precursors to the report, one of the documents
- 14 that was published I believe in June.
- 15 COMMISSIONER GEESMAN: Okay. Thank you.
- 16 COMMISSIONER BOYD: Any other questions
- 17 up here? Al, I just want to share a couple of
- 18 comments. One, I came here to listen to folks in
- 19 the audience and learn, so I'll probably have more
- 20 comments at the end of all this.
- 21 But, as a person who has been shadowing
- gas very closely, I'm still not as reassured as I
- 23 infer from our report that the future is rosy.
- 24 The comments about gas pipeline adequacy, okay I
- 25 can accept that.

1 The concern I have is what about the gas

- 2 to fill the pipelines, and that remains a concern,
- 3 and hopefully we'll hear more about that in the
- 4 course of these two days of discussion.
- 5 So I'm just sharing that with folks,
- 6 that I personally have a concern about their being
- 7 adequate gas supplies to fill the pipeline's
- 8 capacity that we seem to have a sufficiency of for
- 9 the near future anyway.
- The other is just a comment, and that is
- 11 you ran various scenarios, and I found with great
- 12 interest the seemingly very positive results that
- 13 you got from the second scenario as you call it in
- 14 the presentation where higher demand-side
- 15 management renewable impact scenario really does
- seem to add goodly amounts of peak reduction, thus
- 17 saving generation needs.
- And by the same token, increasing
- 19 renewables save us even more in the gas arena, and
- 20 overall you found a fairly significant gas
- 21 reduction from running that scenario, so I just
- 22 post the fact that that's an intriguing analysis
- 23 that certainly tickles my interest, and be
- 24 interested in hearing how other people feel about
- 25 this if they do comment.

So I just put that on the record. The

- 2 last thing I want to say before opening the floor
- 3 up to questions. Well, a couple of comments, just
- 4 for the audience's benefit.
- 5 The agenda for today, which was only
- 6 available today, says there will be staff
- 7 presentation on transmission a little later this
- 8 morning, so staff is attempting to have us talk
- 9 about electricity and natural gas to some degree,
- 10 although electricity fairly heavily this morning.
- 11 And so some of you may or may not want
- 12 to save your comments until after the transmission
- 13 update is given.
- 14 Secondly, I want to thank and commend
- 15 all the state agencies who have been working with
- our staff lo these many, many months on this
- 17 subject.
- 18 The staff has had a working group with
- 19 every conceivable state agency which would have a
- view, a role, an impact on energy in California,
- 21 and several of their representatives are here in
- the audience, and are free to comment at any point
- 23 in time, but I just want to publicly thank the
- 24 diligence of the staff and the state agencies in
- 25 trying to collectively address these issues.

1 It's really going to be nice to see

- 2 government try to speak with one voice on these
- 3 many, many topics. So I thank the various state
- 4 agencies.
- 5 With that, according to the agenda that
- 6 I've been provided, there is an opportunity now
- 7 for any of those state agencies to get up and make
- 8 some comments before I go to the blue cards and
- 9 just call on the audience.
- 10 So is there anyone from our sister
- 11 agencies that have been working on this that would
- 12 like to say anything on this? Now is a good
- opportunity. Seeing nothing, I'm going to then
- 14 move to blue cards.
- Now it's going to be a little tough,
- 16 because many of you may not have known the
- 17 protocol for today. I'm not sure I did until I
- 18 walked in the room. And I'm not sure when it is
- 19 you feel you'd like to speak.
- 20 So I'm just taking a calculated guess
- 21 here in terms of when it's appropriate to call for
- folks. And anyone's welcome to come back
- 23 throughout the two days and add more on any of the
- 24 subjects.
- 25 But for those of you who weren't

1 specific as to day, time, place or subject, your

- 2 subject is getting called on right now. So with
- 3 that, I'm just going to go to the cards. Les
- 4 Guliasi of PG&E was very non-specific, so he gets
- 5 to lead off.
- 6 MR. GULIASI: I'm glad to be able to
- 7 participate in this process. PG&E really hasn't
- 8 been as active as I would have liked for the last
- 9 several years. We did participate in many of the
- 10 workshops and we did submit comments at the
- appropriate time, and I'm hoping that we will now
- 12 have a greater role here at the Commission.
- I first want to compliment the staff for
- 14 assembling such a massive amount of high-quality
- 15 work in the various reports. The sheer volume of
- 16 material is actually quite impressive. For me at
- 17 least it was a daunting task to wade through all
- 18 the materials and come up with some constructive
- 19 remarks to make today.
- I talked to some of you kind of off-line
- 21 about this, but the difficulty I have is, when
- 22 you take all the information that went into the
- 23 compilation of these reports you're left with a
- very high-level you know kind of set of policy
- 25 remarks and recommendations.

1 What we see here is a summary and a

- 2 compilation of all the workshops, the stakeholder
- 3 processes, the comments, and when you get to the
- 4 high level it's really hard to kind of take
- 5 something away and be as constructive as I'd like.
- I think the questions that you posed on
- 7 the website yesterday helped to frame the
- 8 discussion today, but they were posted less than
- 9 24 hours ago, and it's hard to kind of work those
- 10 questions and responses into the remarks here.
- I'd be happy to address any specifics if they come
- 12 up over the course of the two days.
- I hate to say this, and I hate to use a
- 14 cliche, but I'm afraid that the devils lie in all
- 15 the details. And I'm hoping we have the
- 16 opportunity to write some useful comments to you
- in the coming days.
- I guess what I want to do is address one
- or two general issues here, and I think it would,
- 20 they would be addressing the first question that
- you posed in yesterday's website comments or
- 22 questions. And that question was "has the report
- 23 captured the major policy issues?"
- I think from a technical standpoint by
- 25 and large the answer is yes. I think the staff

- 1 did an exceptional job at identifying the key
- 2 issues, the key uncertainties, and laying out for
- 3 everybody, for the state, the key questions that
- 4 face us when we look at infrastructure development
- 5 for the state of California.
- 6 But what I wanted to do was just take a
- 7 step back for a moment, and give you something to
- 8 think about in terms of ideas that you might add
- 9 to these reports as you move forward and finalize
- 10 them before final publication and adoption.
- I think I'm going to reserve my remarks
- on the transmission issue until you have the staff
- 13 presentation this afternoon.
- But I think if you take a look at a
- 15 couple of case studies, transmission planning
- 16 being one of them, and resource procurement in the
- 17 financial markets as a second, I think that you
- 18 can use, there's some useful lessons there in
- 19 studying those two topics that might give you some
- 20 other ways of framing some of the questions in the
- 21 report, in the final report.
- 22 Again, taking a step backwards. I think
- 23 the CEC's IEPR process, guided by and mandated by
- 24 the Legislature, is a good first start for the
- 25 state to address well-needed infrastructure and

- 1 development in the state.
- 2 And I think the joint agency Energy
- 3 Action Plan, as a blueprint and as a statement of
- 4 shared goals by the regulatory agencies, is also a
- 5 very good start.
- 6 But what I think is missing from this
- 7 report is kind of a reality check on, you know,
- 8 the broader context. And we're still in a state
- 9 of flux, we're just emerging from the energy
- 10 crisis.
- 11 And I think more than anything we still
- 12 need a picture, a blueprint, for restoring order,
- 13 stability and predictability for the state's
- 14 infrastructure development. We still have
- 15 multiple agencies doing multiple things, not
- 16 always in concert.
- We have this agency, we have the CPUC,
- 18 and then we also have the ISO. And I think again
- 19 the ISO is critical here when we talk about
- 20 transmission planning.
- 21 When you had the joint meeting about a
- 22 month ago, early this month, on the Energy Action
- 23 Plan, I addressed a couple of issues that I'd like
- 24 to repeat here.
- 25 In this kind of mixed up regulatory

- 1 process we have, what we find a lot is that we
- 2 don't have agencies issuing clear, decisive,
- 3 definitive, decisions. What I find is that we
- 4 don't have the agencies issuing decisions that are
- 5 properly sequenced.
- I don't think there are good handoffs
- 7 from one agency to the next. We also don't have
- 8 very consistent decisions across agencies.
- 9 Sometimes we find ourselves looking for guidance
- 10 from one to the other. We feel that there's
- 11 cross-fire and we're kind of caught in the middle.
- 12 I think the agencies need to do a better
- job of cross-referencing each other's decisions to
- 14 give some clarity to participants. We also need
- 15 more timely decisions.
- I think what we find is that the
- 17 decisions that come out of the Commissions conform
- 18 to a regulatory timetable, but they don't conform
- 19 to the timetable of the marketplace, they don't
- 20 conform to the timetable of the broader economy.
- 21 So I think we need regulatory decisions
- 22 that are grounded better, in the broader real-
- 23 world environment of the economy and the
- 24 marketplace. And I think we need a much less
- 25 litigious and more collaborative process.

1 I think that your process, at the Energy

- 2 Commission, is much more collaborative than at say
- 3 the Public Utilities Commission. I think the
- 4 joint Energy Action Plan is a good guiding
- 5 principle for greater collaboration, not only
- 6 among the agencies but with stakeholders as well.

- 8 But I think we really need to strive
- 9 more clearly toward a less litigious and more
- 10 collaborative process.
- 11 My company is still in chapter 11
- 12 bankruptcy. We are close to emerging from that
- 13 state, but we really need to focus on what we need
- 14 to do as a state to ensure that the utilities
- 15 return to some kind of financial health, and that
- 16 we retain a credit-worthy status, and that we can
- 17 sustain that credit-worthy status and that
- 18 financial health for the long term.
- I think the planning that we do in this
- 20 state oftentimes is just-in-time resource
- 21 planning. And I think we have to move toward the
- 22 long view, and I think your process, quite
- 23 frankly, does help us get started on that path.
- I just wanted to make a couple of
- 25 remarks about resource adequacy, resource

- 1 procurement. This, I find, is one of the most
- 2 important areas for you to give some thought, and
- 3 to address some issues in your final report.
- 4 As we know, there is a proceeding
- 5 underway at the Public Utilities Commission that
- 6 is to establish policies and cost recovery for the
- 7 utilities getting back in the procurement role.
- 8 There are still a lot of questions that are
- 9 unaddressed, unresolved.
- 10 We're, you know, I guess one of the
- 11 basic questions is what role will the utilities
- 12 play going forward. Will they play a resource
- acquisitions role, or will we get back in the
- 14 business of actually building power plants back to
- 15 the future?
- 16 That's a very tough question. It's not
- 17 going to be resolved overnight. My company is now
- 18 just struggling with that question. And we're
- 19 studying it and we're analyzing that question.
- 20 And it's unclear at this moment where we're going
- 21 to end up.
- If we're going to become, once again,
- 23 the builders of generation, or we'll just become
- 24 the acquirers of the resources on behalf of our
- 25 customers. But investment-grade status is

1 critical, it's the first condition that needs to

- 2 be met.
- 3 We have a lot of these questions out
- 4 there. We have, I believe, a viable independent
- 5 power producer market. And we have to address
- 6 what role the utilities play, what role the IPP's
- 7 play in that market.
- 8 And I don't think, at this point, in the
- 9 proceeding at the Public Utilities Commission, or
- 10 as reflected in your report, we're kind of
- 11 grappling with those questions, and I think we're
- 12 not fully understanding what the financial markets
- 13 require, and what the financial markets are
- 14 looking for in California with respect to clear
- and decisive decisions by the regulatory agencies,
- and until there's a track record developed here in
- 17 the state where the financial markets can view
- 18 California with some certainly and some
- 19 predictability we're not going to have a viable
- 20 IPP market, we're not going to have a viable
- 21 utility role, and we're just going to be kind of
- 22 doing planning just in time.
- I just want to leave you with one
- 24 thought. When I was thinking about this -- again,
- 25 this might be premature because tomorrow we're

```
1 going to address gas -- but if you think back
```

- about a decade ago, in the early 90's, think about
- 3 what was happening in the state of California with
- 4 respect to interstate pipeline capacity,
- 5 notwithstanding the question that you just posed a
- 6 minute ago, Commissioner Boyd, with respect to
- 7 perhaps there's enough capacity, now you're
- 8 concerned about filling the pipes with supply.
- 9 But if you think about it, back a year
- 10 ago there were many different pipelines that were
- 11 beginning to compete, and there were some in the
- 12 state that wanted to have a very heavy-handed form
- of regulation, determining and dictating who would
- 14 win and who would lose.
- 15 I think ultimately the state, with the
- 16 help of this Commission, when Dick Bilas was here,
- 17 I think helped influence policy such that the
- 18 regulators kind of pulled back and kept their
- 19 hands off and allowed the market to decide what it
- should do with respect to adding new pipeline
- 21 capacity in the state.
- 22 And I think what happened is we did
- enough, pipeline capacity was added, and it wasn't
- 24 done through the heavy-handed kind of regulation.
- 25 It was done through letting those companies and

1 letting the market decide. And I think that might

- 2 serve as a good model as we go forward and think
- 3 about its application to the electricity sector.
- With that, I think that concludes my
- 5 remarks. And again, if there are issues that come
- 6 up during the course of the day on some of the
- 7 specific questions, I'd be happy to address them.
- 8 COMMISSIONER BOYD: Thank you, and
- 9 indeed please feel free to comment at any time.
- 10 Any comments or questions? And I'll reshuffle
- 11 your card into the transmission and other stack
- 12 here, Les. I need my glasses here. Alvin Pak
- 13 from Sempra.
- 14 MR. PAK: Commissioner, I have a copy of
- 15 a presentation. I don't know if you want to
- 16 follow along while I give it?
- 17 COMMISSIONER BOYD: That'd be fine.
- 18 MR. PAK: I have copies I can leave at
- 19 the back table. I also have comments on the gas
- 20 report, the transmission report, I don't know if
- 21 you want me to give you all of those comments at
- 22 the same time, or if you want me to break this
- 23 into three different pieces. I can do it either
- 24 way, I'll be here both days.
- 25 COMMISSIONER BOYD: You pose a very

1 difficult, I'm struggling with the idea of parsing

- 2 this down into little pieces visavis just hearing
- 3 from folks, because there's actually people in the
- 4 audience who are going to be limited in their time
- 5 and availability who probably ought to be privy to
- 6 a whole cross-section of things, so I'm going to
- 7 give you license to talk about the whole thing if
- 8 you choose to.
- 9 MR. PAK: All right. For the record, my
- 10 name is Al Pak, I'm the Director of Regulatory
- 11 Policy and Analysis for the Sempra Energy Global
- 12 Enterprise business units. Just by way of
- introduction, the Global Enterprise business units
- are the fun side of Sempra Energy Corporation.
- We are the merchant sisters to our more
- 16 serious minded brethren at the Sempra Energy
- 17 utility companies, which are San Diego Gas &
- 18 Electric and Southern California Gas Company.
- 19 COMMISSIONER BOYD: I've got to
- 20 remember that.
- 21 MR. PAK: They probably have
- 22 participated much more extensively in these
- 23 proceedings than we did. There are basically four
- 24 major lines of business at Sempra Energy Global
- 25 Enterprises.

1 Sempra Energy Resources, which is an

- 2 independent power producer and power plant
- developer. We are co-owners of the Elk Hill
- 4 project near Bakersfield. We recently received a
- 5 certificate from this commission to develop the
- 6 Palomar Power Project in San Diego County. We
- 7 also have a number of power plants that are coming
- 8 into operation or that are in operation, ready to
- 9 serve California's energy needs.
- There is also the Sempra Energy
- 11 International Business unit. This is the company
- 12 that runs our international energy operations, and
- is the developer and operator of our proposed LNG
- 14 terminal projects, both foreign and domestic.
- We also have Sempra Energy Solutions,
- which is a retail energy service provider
- 17 operating in 14 states and Canada. And finally we
- 18 have Sempra Energy Trading, which is our wholesale
- 19 energy trader and metal trading unit, based in
- 20 Stamford, Connecticut and London, England.
- 21 First of all, I want to follow the
- 22 comments of Mr. Guliasi, and we put this forth,
- 23 congratulations for the staff on a very fine
- 24 report. The work and thought that went into these
- 25 reports is self-evident. This is becoming a

1 source book for understanding the California

- 2 market at the Global Enterprise business unit.
- 3 We are using the data that you have
- 4 prepared, and the policy recommendations that we
- 5 found in the report, and we think this is a
- 6 wonderful piece of work. We have a few comments,
- 7 and I'll suggest that these -- because I have
- 8 relatively few comments, it suggests the quality
- 9 of the report itself.
- 10 With respect to the natural gas
- 11 assessment, we have a few data updates,
- 12 particularly in the LNG area, and we have a policy
- 13 recommendation that we would ask you to reflect on
- 14 with respect to the importation of LNG supplies
- 15 into California.
- With respect to the electricity
- 17 assessment, we encourage this Commission to make
- the report more meaningful by recommending
- 19 solutions to the Governor and the Legislature with
- 20 respect to certain specific critical policy
- 21 issues, or at least if the report would go so far
- as to frame those issues for the Governor and the
- 23 Legislature so they can be resolved in the next
- 24 legislative section. And I'll be getting to those
- 25 in just a moment.

```
1 First, turning to the gas market
```

- 2 assessment. I want to update the cost assumptions
- 3 that are found in the natural gas assessment with
- 4 respect to LNG processing, transport and delivery.
- 5 We would ask that you add a supplemental base
- 6 supply case scenario that assumes the deliver of
- 7 LNG to the west coast of North America and
- 8 possibly to California by 2007.
- 9 And finally we would recommend that you
- 10 urge the Governor and the Legislature to adopt an
- 11 action plan related to seeing what we can do about
- 12 reconsidering and modifying the gas quality
- 13 standards that could ultimately result in
- 14 facilitating deliveries of LNG to California.
- 15 First, with respect to your LNG cost
- 16 assumptions, these are found at page 67, and in
- 17 the Appendix at page B-1 of the Natural Gas
- 18 Assessment Report, the production costs that we
- 19 are seeing in the market for a green field
- 20 liquefaction facility runs between \$200 and \$300
- 21 per metric tons, translating into approximately
- \$1.3 billion to \$1.6 billion for facilities which
- 23 are typically sized in this 6.6 million tons per
- 24 year range.
- 25 While those numbers may generally be

1 consistent with the figures shown in your report,

- 2 the staff report indicates that the higher-end
- 3 costs would be closer to \$2 billion.
- I would suggest that, although there are
- 5 facilities who's cost does approach that range,
- 6 they're not being considered for export to the
- 7 United States, because in the absence of some
- 8 other economy in the value chain they simply
- 9 wouldn't be economic for import.
- 10 So the range that I think you're going
- 11 to find in the market for deliveries to the U.S.,
- 12 you're looking at liquefaction facilities cost
- somewhere in this \$1.3 billion to \$1.6 billion
- 14 dollar range.
- 15 Secondly, we are developers of the Costa
- 16 Azul project and the Cameron project in Louisiana.
- 17 And the figures that you show in your report for
- 18 the development costs of re-gasification
- 19 facilities is about 100 to 150 percent higher than
- 20 our anticipated cost of bringing those facilities
- 21 to market.
- The development cost of a facility with
- 23 an output capacity of about a billion cubic feet
- 24 per day runs between \$500 to \$600 million,
- 25 depending on the site itself and the requirements

1 for accessing pipelines and the construction of

- 2 jettys to receive the supplies.
- We haven't seen anything in the order of
- 4 magnitude that the staff has included in their
- 5 cost assumptions, so we would suggest that you re-
- 6 look at the figures you were using.
- 7 I think these figures are also
- 8 consistent with the Mitsubishi cost projections
- 9 that are being used for Long Beach, although I'm
- 10 not privy to those. We understand those to be
- 11 pretty consistent with our own cost estimates.
- 12 Your marine transport costs are
- generally consistent with what we're finding
- 14 available in the market. However, the staff
- 15 report doesn't take into consideration that new
- ships and new ship designs, running somewhere
- 17 between 10 and 20 percent larger than the sizes
- 18 considered in the report are coming to market.
- 19 And you can see just from the figures
- 20 shown on this sheet that there is considerable
- 21 per-unit cost efficiencies associated with those
- 22 new, larger ships.
- The bottom line from the use of our
- 24 data, and these numbers presented to you, is that
- 25 LNG can be cost-competitive at the \$3.50 per

- 1 million BTU price range.
- 2 That's a figure about 15 percent lower
- 3 than is shown in the staff report, and as we
- 4 understand it, the staff was using 1998 dollars,
- 5 so the staff report figures are probably closer to
- 6 20 to 25 percent higher than is required for LNG
- 7 to be economic and competitive in U.S. markets
- 8 today.
- 9 Turning to our second recommendation,
- 10 although the staff developed a gas supply scenario
- in which LNG was assumed to be imported into at
- 12 least three new terminals by 2007, we believe that
- you can get a better picture of the gas supply
- 14 situation on the west coast if you add what we
- 15 call a supplemental base supply case.
- 16 There are currently four projects under
- 17 serious consideration for development on the North
- 18 American west coast. You have our Costa Azul
- 19 project at Ensanada, Shell Oil's project at
- 20 Ensanada, the Marathon project in Tijuana, and the
- 21 Mitsubishi project in Long Beach.
- I think it's a fairly safe assumption
- 23 that one of these projects will come to fruition
- 24 and will come to market in 2007 to 2008 time
- 25 frame. So if you built a supplemental base case,

1 assuming that 500 million cubic feet per day would

- 2 be delivered in to California, I think it would
- 3 change your view of what the long-term
- 4 supply/demand balance would be in the state.
- 5 We also think by running this scenario
- 6 you would find yourself exploring a couple of
- 7 other issues. First of all, our gas price data --
- 8 and although I'd like to provide it to you I've
- 9 been told that I can't -- our gas price data
- 10 indicates that your base case price is low in the
- 11 early years, and high in the out years.
- 12 Generally, the consensus view and the
- view that we're seeing based on forward price
- 14 contracts in the gas market on the west coast
- indicate that prices will rise consistently
- 16 through 2007, and at that time, as LNG supplies
- 17 are introduced into the U.S. market, prices will
- 18 fall and tend to rise more slowly over time.
- 19 So by running the supplemental base
- 20 supply case we think you'll get another view of
- 21 how the gas supply demand balance and prices will
- 22 evolve over time.
- 23 And the final issue on gas quality
- 24 standards. As the report notes, there are certain
- 25 California gas quality standards that may preclude

- 1 the delivery of LNG to California markets under
- 2 the best available terms and conditions.
- 3 In particular, the Air Resources Board
- 4 methane content standards would require
- 5 substantial levels of additional processing of LNG
- 6 supplies prior to their injection into the
- 7 California utility system. There are few, if any
- 8 current LNG suppliers that can meet these
- 9 standards.
- 10 It is a considerable added cost to the
- 11 LNG delivery chain to add processing into the
- 12 stream. While the Gas Assessment Report
- 13 recommends that a review of these standards take
- 14 place, I think what we actually need in the LNG
- industry to encourage the importation and delivery
- of LNG to California is an action plan, and we
- 17 would strongly recommend that this Commission make
- 18 policy recommendations with respect to who should
- 19 take the leadership role in conducting and
- 20 implementing the action plan and the
- 21 accountabilities for collateral and ancillary
- 22 agencies be assigned.
- 23 That's pretty much along the lines of
- 24 the kinds of recommendations that we have for the
- 25 electricity assessment. There are a number of

1 policy issues which are suggested by the report

- 2 but which are not resolved by the report, and we
- 3 would strongly encourage this Commission to take
- 4 a leadership role in addressing these issues and
- 5 making strong recommendations to the Legislature
- 6 and the Governor with respect to how these issues
- 7 should be resolved.
- 8 We think the Legislature has placed this
- 9 Commission in the role of leading the energy
- 10 agencies with respect to policy in California.
- 11 You have the ability to adopt findings that would
- 12 be binding on the other agencies regulating the
- 13 energy activities in this state, so at least we
- 14 think that you can step forward and start the
- 15 debate by taking recommendations along the lines
- of the kinds of things I'm going to suggest, and
- 17 we have three.
- 18 First, we believe that transmission
- 19 jurisdiction would benefit from the creation of a
- 20 joint board or a super-jurisdictional lead agency
- 21 to take care of siting of transmission in this
- 22 state.
- 23 Secondly, we think that the supply and
- 24 demand case needs to be broadened to address the
- 25 regional nature of electricity markets, and how

1 California state agencies are going to participate

- 2 in the development of the regional regulation of
- 3 these markets.
- And finally, we notice the key omission
- 5 of market structure issues from the report, and
- 6 would encourage you to take positions with respect
- 7 to the appropriate market structure for California
- 8 electricity markets.
- 9 With respect to transmission siting, the
- 10 electricity assessment indicates that there should
- 11 be cooperation among the agencies, and certainly
- 12 the Energy Action Plan points in that direction.
- But I will tell you, as a potential
- 14 developer of transmission in this state, and as a
- user of transmission in this state to facilitate
- 16 both bilateral contract arrangements and short-
- 17 term spot sales, that cooperation is going to be
- 18 insufficient.
- 19 And we recommend that the Energy
- 20 Commission make recommendations to the Legislature
- 21 and the Governor with respect to siting
- jurisdiction, or at least invite the governor and
- 23 the Legislature to address jurisdictional issues.
- 24 All of the agencies involved in
- 25 transmission siting have very specific legal

1 responsibilities. In addition, they have their

- 2 own cultures and traditions.
- 3 There are a couple of things we think
- 4 will get in the way of resolving all of those
- 5 kinds of problems and getting to a responsible
- 6 transmission siting policy and infrastructure in
- 7 this state.
- 8 First of all, the ISO is not part of the
- 9 Energy Action Plan, and until we see the ISO
- involved as part of the Plan implementers it's
- 11 hard for us to anticipate that their findings with
- 12 respect to need are going to influence the other
- 13 agencies.
- 14 And secondly, we don't like to bring
- 15 these sorts of things up, but we worry that the
- 16 Energy Action Plan effort will not survive the
- 17 current appointees, who seem very committed to
- 18 implementing it. As I said, the agencies have
- 19 very different legal responsibilities, as Mr.
- 20 Guliasi pointed out.
- You have much different processes and
- 22 procedures. We see the Energy Commission actively
- 23 participating in PUC proceedings, but see them
- 24 participating as just any other party.
- We don't see, for example, joint ALJ's

```
1 from all the other agencies conducting the
```

- 2 hearings making joint findings and recommendations
- 3 to their respective leaderships.
- 4 So we believe that you ought to specify
- 5 for the Commission what the appropriate state
- 6 transmission siting and approval agency ought to
- 7 be. It can be a joint powers agency, involving
- 8 all of the agencies in the Energy Action Plan.
- 9 But we think it ought to be more formal than the
- informal process you are currently pursuing.
- 11 Secondly, the California electricity
- 12 market is really a subset of a larger regional
- 13 electricity market. The Electricity Assessment
- 14 Report makes very little mention of developments
- in the entire western region, despite
- 16 acknowledging that we are in regional market.
- 17 It doesn't specify, for example, how
- 18 this state should be coordinating with other
- 19 states and the FERC with respect to resolving
- 20 demand and supply issues in the region. You've
- 21 already heard the discussion of resource adequacy.
- While I understand the state doesn't
- 23 always appreciate the efforts of the feds to
- intervene, the FERC, among its recommendations in
- 25 the standard market design Notice of Proposed

1 Rulemaking did have what we thought was one good

- 2 idea, and that was that the regions ought to
- 3 cooperate in developing resource adequacy issues.
- 4 As an example, I don't know if you know
- 5 this, but the Canadian Electricity Association,
- 6 which represents 95 to 99 percent of all
- 7 production facilities in Canada, has filed a
- 8 protest with FERC in their rulemaking regarding
- 9 the market-base rates authority rules that would
- 10 be imposed on those holding such authority,
- 11 particularly with respect to physical withholding.
- 12 CEA has indicated that, under certain
- 13 circumstances, a Canadian producer could be
- 14 violating local regulatory rules if it were
- 15 obligated to not withhold energy during certain
- 16 circumstances.
- 17 If the CEA is correct, and Canadian
- 18 producers would return their market based rates
- 19 authority, their participation in the western
- 20 region could be substantially reduced. That would
- 21 have implications for the Pacific Northwest, which
- in turn would have very strong impacts on
- 23 California supply availability.
- 24 Those are the kinds of issues that need
- 25 to be addressed so that the Governor and the

1 Legislature and everyone else understands how the

- 2 coordination of regional circumstances can be
- 3 accomplished.
- 4 We anticipate that California will
- 5 continue to be a large regional importer and
- 6 exporter of seasonal energy, so we need to
- 7 integrate our efforts with the efforts of the
- 8 surrounding states, the surrounding RTO's and
- 9 ISO's and Canada.
- 10 Finally, turning to our last
- 11 recommendation, the hallmark of the staff report
- is the admonition that you can't eliminate risks
- in the energy market, but you can manage them. We
- 14 take that to heart. We also believe that the
- 15 market structure tells you how you manage risk.
- 16 It provides the incentives and
- 17 disincentives to engage in certain behaviors that
- 18 guide your investment. It tells you who
- 19 participates in the effort to manage the risk
- 20 extant in the markets.
- 21 So issues such as wholesale procurement
- 22 practices, which was strongly encouraged in last
- 23 session's Assembly Bill 57, how resource adequacy
- 24 issues will be resolved, the parameters of that,
- 25 particularly for the entities not regulated by the

1 Public Utilities Commission, how short and long-

- 2 term markets in both supply and demand resources
- 3 are managed, selected and implemented, and funded.
- 4 Whether we will have retail competition,
- 5 and on what terms and conditions. Whether
- 6 alternative suppliers ought to be encouraged in
- 7 the state. All of those kinds of issues need to
- 8 be addressed as we move forward, and we are
- 9 looking forward to the Energy Commission taking a
- 10 lead with respect to resolving what the market
- 11 structure in the state ought to be for the near
- 12 future.
- 13 After the Northeast blackouts you hear a
- 14 lot of people saying that that kind of thing
- 15 shouldn't happen on my watch.
- So if you want to develop
- 17 recommendations with respect to market structure
- 18 we think you can take "not on my watch" standard,
- 19 pick the policies, the objectives, and the
- 20 outcomes that you want to serve, whether it's any
- of the ones listed here -- reliability, stability,
- 22 diversity, environmental sustainability, cost-
- 23 effectiveness, resource sufficiency -- pick one,
- 24 put the incentives and the market structure around
- 25 those, and we think they'll adequately be

- 1 addressed.
- 2 So the bottom line is the Global
- 3 Enterprise business unit strongly encourages the
- 4 Commission to step out, step up, and tell the
- 5 Governor and the Legislature what needs to be done
- 6 with respect to resolving the California
- 7 electricity market structure, so at the need of
- 8 the day we can all go home and say "that didn't
- 9 happen on my watch."
- 10 And again, I would urge you to do that
- 11 because your findings would be binding on the
- other agencies who think they have jurisdiction
- over market structure issues as well.
- 14 Those are our comments. if you have any
- 15 questions, I'd be happy to answer them.
- 16 COMMISSIONER BOYD: Thank you, Mr. Pak,
- 17 that was enlightening, intriguing, all of the
- 18 above. Any questions?
- 19 COMMISSIONER GEESMAN: I'd just like to
- thank you, Mr. Pak, for your comments, and in
- 21 particular as it relates to the transmission
- 22 system. It's my firm hope that we can rise to the
- 23 challenge that you've put before us.
- 24 Sempra, I think, has gone through the
- 25 crucible most recently of the dysfunctional nature

of the status quo, and while I think that the

- 2 Energy Action Plan is a good start, and that there
- 3 is good faith on the part of all the members of
- 4 the three agencies working on that, we really do
- 5 need to more permanently address these problems,
- 6 and address them in a more straightforward,
- 7 statutory sense.
- 8 And I thank you for your
- 9 recommendations, and I'm certainly hopeful that we
- 10 can expect continued leadership from your company
- 11 and your industry on these questions as this issue
- goes to the Governor's office and the Legislature.
- 13 MR. PAK: Thank you, Commissioner.
- 14 COMMISSIONER BOYD: Chairman Keese?
- 15 CHAIRPERSON KEESE: I'm happy to be here
- 16 versus spending the whole day bailing water out of
- 17 a tub that was receiving all the waters from the
- 18 above apartments since six this morning.
- 19 Sorry if I missed part of your comment,
- 20 but you referenced the Energy Action Plan and a
- 21 relationship to FERC. You know, it's my hope that
- 22 by the time we wrap up here we can incorporate the
- 23 western regional activities that are taking place
- 24 now through the Western Governors Association,
- 25 which involves a transmission planning agenda, a

1 resource adequacy agenda, and a number of other

- 2 activities taking place in the WIEB and CREPC
- 3 groups and the SSG-WI process.
- 4 There are a number of activities in
- 5 which California is actively participating through
- 6 the Public Utilities Commission and through the
- 7 Energy Commission, input from the ISO, the
- 8 Oversight Board to deal with the western regional
- 9 issues.
- Now it becomes a major task to try and
- incorporate that into our process, when we're not
- 12 directly involved. But I think the Action Plan
- gave you a suggestion that the three agencies
- 14 working together believe that we have to deal with
- 15 FERC in the mix.
- And we have been dealing with the ISO in
- 17 the mix. So maybe it is broader than somebody
- just making a statement about where we should go.
- 19 Maybe we are moving towards action across the
- 20 board in California.
- 21 MR. PAK: We understand there's a lot of
- 22 heavy lifting involved here, and its pretty easy
- 23 for us to say get involved in all of these
- 24 interstate, multi-state processes.
- 25 But there are a number of them, and

1 they're all important, and they're all influential

- on what happens to California's energy markets.
- 3 We participate in those more so than we do in
- 4 California, largely to avoid conflicts with our
- 5 sisters at the utilities.
- 6 But there are a number proceedings. For
- 7 example, the Oregon PUC recently started its
- 8 integrated resource planning process where they're
- 9 going to set the rules for how their market
- 10 structure is developed, and the rules and
- 11 conditions under which merchant generators, retail
- 12 energy service providers will participate in their
- 13 market.
- 14 California is not represented in those
- discussions, and there's a good deal of
- development that could occur both with respect to
- 17 renewables and fossil-fired facilities that we're
- 18 more familiar with at Sempra, that could be used
- 19 to serve not only Oregon load but California load.

- 21 And I think the Oregonians have
- 22 understood that they can get more efficient plans
- 23 by sort of subletting their resources to
- 24 California. We believe California ought to be
- 25 involved in that process as that discussion takes

- 1 place.
- 2 Thee are a number of instances like
- 3 that, where we don't see California state agencies
- 4 there. And I know it's hard during these budget
- 5 times for you to be everywhere all the time, but
- 6 we would encourage at least the Governor and the
- 7 Legislature to be advised that these are important
- 8 processes. And you need to have a California
- 9 voice there.
- 10 CHAIRPERSON KEESE: Thank you.
- 11 COMMISSIONER BOYD: Your point is well
- 12 taken. You mentioned earlier that in the Energy
- 13 Action Plan the ISO -- of course it's three
- 14 agencies, not four -- I would point out that one
- of the dilemmas is that the ISO is not a state
- 16 agency.
- 17 And they were at the table for some of
- 18 the discussions, and as Chairman Keese indicated,
- 19 we do our utmost to work cooperatively with them,
- 20 but that's one of the I'm sure policy issues that
- 21 sits on the table, the roles of the multiple
- 22 agencies, and who is and who is not a state
- 23 agency, and who should do what.
- 24 And I think we're all scrambling to do
- our best to sort that out. You alluded to the,

1 referred to the current political climate, but I

- 2 wasn't quite sure you were going with the comment.
- 3 Some of us are mildly impervious to the
- 4 storm that's going on around us right now, and
- 5 we'll still be here, yours truly, for three and a
- 6 half years. So some of us will try and see our
- 7 way through the eye of the storm that exists now
- 8 and try to be mildly courageous with regard to
- 9 making some recommendations with some findings.
- 10 So, watch this space, and stay involved.
- 11 I was very pleased, as were my fellow
- 12 Commissioners I hear, with the extent of your
- 13 testimony, and we appreciate it.
- 14 MR. PAK: Thank you, Commissioner.
- 15 COMMISSIONER BOYD: Thank you. Now, in
- 16 deference to a time request, I'll call on Mr. Joe
- 17 Sparano, President of WSPA.
- 18 MR. SPARANO: Good morning Chairman
- 19 Keese, Commissioner Boyd, Commissioner Geesman,
- 20 Advisors, ladies and gentlemen in the audience.
- 21 My name is Joe Sparano, I'm President of the
- Western States Petroleum Association, or WSPA.
- I'm please to provide WSPA's brief oral
- 24 comments on the Energy Commissions Electricity and
- 25 Natural Gas Assessment Report as our input to the

```
1 states Integrated Energy Policy Report, or IEPR.
```

- 2 WSPA appreciates the Energy Commission's
- 3 extension of the date for submittal of written
- 4 comments to September 2nd. At that time WSPA will
- 5 submit more comprehensive written testimony for
- 6 the record.
- 7 At this point we would like to request
- 8 that you consider adding Bakersfield as a final
- 9 hearing location when the Energy Commission
- 10 considers adoption of the IEPR in October.
- 11 COMMISSIONER BOYD: Consider it done.
- MR. SPARANO: Oh, good, then I can skip
- 13 the rest. That's good. As you know, we have a
- 14 significant number of members that operate in that
- area, and they are keenly interested in engaging
- in this study and on these issues.
- 17 COMMISSIONER BOYD: We had observed that
- 18 a week or two ago, and already made that decision.
- 19 Sorry it hadn't filtered out.
- MR. SPARANO: You're always a week or
- 21 two ahead of me. I have to work on my act here.
- We do appreciate this opportunity to share our
- 23 industry's views and suggestions.
- WSPA members view the Energy
- 25 Commission's program to develop a comprehensive

1 energy plan for California to be an extremely

- 2 important effort that will set the future
- 3 direction for our collective goal of meeting the
- 4 state's increasing energy demands.
- 5 WSPA agrees with the Energy Commission
- 6 that California needs a strong and flexible energy
- 7 infrastructure to meet the energy needs of the
- 8 state. Working with the stakeholders will help
- 9 ensure that consumers receive reliable, reasonably
- 10 priced electricity and natural gas that will
- 11 promote economic growth, protect public health and
- 12 safety, and last but hardly least, protect the
- 13 environment.
- 14 A balanced energy plan is needed for
- 15 California to continue providing the opportunity
- 16 for economic growth that our citizens expect. A
- 17 balanced energy plan should also result in ample,
- 18 reliable cost-competitive supplies of energy.
- 19 In-state energy production has not kept
- 20 pace with demand, so reliance on imported energy
- 21 is necessary. California has valuable in-state
- 22 resources, and access to various external
- 23 resources of supply. The cost of these supplies,
- 24 although largely set by commodity markets, can be
- 25 managed by maintaining diverse supply alternatives.

1 Our additional comments and

- 2 recommendations are grouped in three areas.
- 3 Natural gas -- including intra- and interstate --
- 4 liquefied natural gas, and electricity and co-
- 5 generation.
- 6 With regard to natural gas, WSPA
- 7 believes that there are opportunities to replace
- 8 in-state gas reserves, and to support economically
- 9 competitive in-state gas supplies.
- 10 WSPA is concerned over proposed car and
- 11 motor vehicle compressed natural gas
- 12 specifications, and the attempts by some to force
- 13 application of those standards on producers of
- 14 commercial natural gas.
- We are participating in the Energy
- 16 Commission's working group, seeking resolution of
- that issue, as well as addressing the issue of the
- inability to get low BTU gas to market in northern
- 19 California.
- 20 WSPA supports creating incentives for
- 21 new investment in intra and interstate pipelines,
- 22 as needed to deliver gas to and throughout
- 23 California. We also support diversifying the fuel
- 24 base for electricity generation in California.
- 25 For LNG, WSPA supports promotion of the

1 installation of LNG facilities in strategic market

- 2 locations. Adding a commercially significant
- 3 volume of LNG to the supply mix will enhance
- 4 supply alternatives that may serve to dampen
- 5 market volatility.
- 6 Maintaining a strong instate natural gas
- 7 supply, importing or increasing supplies of LNG,
- 8 and supporting growth of pipeline capacity in
- 9 several systems, not just one, will help buffer
- 10 the impact of temporary interruptions that may
- 11 occur.
- 12 With respect to electricity, WSPA
- 13 supports establishing and maintaining the private
- 14 marketplace for electricity, ensuring equitable
- 15 rate setting for industrial customers, promoting
- 16 market opportunities and choice for industrial
- 17 customers, promoting customer generation supplies,
- 18 both co-gen and self-gen, and maintaining a stable
- 19 electricity regulatory and policy environment.
- 20 WSPA strongly supports the promotion of
- 21 energy efficient power generation, such as co-
- generation, to reduce California's natural gas
- 23 demand. Most California oil and gas companies are
- large users of electricity, and many have major
- 25 co-generation investments.

1 These co-gen units use internally

- 2 produced fuel to generate power for our member's
- 3 facilities, and export surplus electricity into
- 4 the power grid. WSPA supports co-generation,
- 5 because it creates private investment, jobs, and
- 6 tax revenues for California. It enables customers
- 7 to manage and stabilize energy costs.
- 8 Co-generation increases electricity
- 9 dedicated to serve California, and enhances the
- 10 reliability of the state's transmission grid.
- 11 While increasing energy efficiency and reducing
- 12 air emissions, co-generation reduces the state's
- 13 reliance on natural gas and natural gas
- 14 transportation for electricity generation.
- In summary, WSPA appreciates the
- opportunity to comment on the Energy Commission
- 17 plans for meeting the state's increasing energy
- 18 demands through the effective and efficient use of
- 19 natural gas, liquefied natural gas, and
- 20 electricity supplies.
- 21 As with our comments on the strategies
- 22 to reduce petroleum dependency, WSPA believes
- 23 there is great merit in expanding the availability
- of existing clean fuel supplies for energy
- 25 generation, while developing and implementing new

1 sources of energy to meet California's growing

- 2 demand.
- 3 Thank you for the opportunity to speak
- 4 before you, and if you have any questions I'd be
- 5 happy to answer them.
- 6 COMMISSIONER BOYD: Thank you, Mr.
- 7 Sparano. Any questions?
- 8 CHAIRPERSON KEESE: I'd like to just
- 9 ask, clearly the most important issue to your
- 10 industry is the petroleum aspects, the crude oil,
- 11 gasoline, diesel, etc. We have to balance that
- 12 interest with electricity and natural gas.
- Do you have any comments regarding the
- 14 significance, does the industry consider the
- 15 electricity segment and its impact on the industry
- 16 very significant or a minor area, or --?
- 17 MR. SPARANO: I would hardly
- 18 characterize it as minor. It varies in the eye of
- 19 the beholder. But we are significant users of
- 20 electricity, as I mentioned.
- 21 We generate a fair amount among our
- 22 members, and I'd like to remind the Commissioners
- 23 that, while WSPA is often seen in the light of
- 24 transportation fuel activities that involve crude
- 25 and gasoline and diesel, we have a significant

1 number of members who are producers of natural

- 2 gas, who are owners of co-generation facilities.
- 3 So this entire area is of keen interest
- 4 to us, and of deep importance to our members, and
- 5 we plan to stay engaged on it because it is such
- 6 an important manner.
- 7 CHAIRPERSON KEESE: Good. Thank you.
- 8 COMMISSIONER BOYD: Mr. Sparano, I'm
- 9 following up on Chairman Keese's comments. I
- 10 think I know that electricity is a valuable
- 11 component of your industry, and the inputs to the
- industry, and you did -- and I appreciate it --
- 13 speak to the continuing support for co-gen and
- 14 self-gen.
- I was glad to hear that because during
- 16 the depths of the energy crisis we reached out to
- 17 your industry in the area of self-gen and a couple
- of your members actually built a couple of
- 19 facilities, and we climbed a terribly steep and
- 20 slippery slope together in getting that completed
- 21 in the collapse of the California market, which
- 22 has not looked kindly upon self-gen, in the way
- 23 that it restructured itself.
- 24 So I was kind of gratified to hear that
- 25 you're still willing to speak to that issue and

1 support that issue, because I personally see that

- 2 as something that makes a lot of sense, for
- 3 electricity security reasons, for post-9/11
- 4 security reasons, and what have you, to have
- 5 refineries that are somewhat self-reliant in terms
- of their electricity needs, which are mammoth,
- 7 quite frankly.
- 8 So, anyway, so noted, and I appreciate
- 9 the continued thoughts along those lines. Any
- 10 other comments, questions? Thank you very much.
- 11 MR. SPARANO: Thank you.
- 12 COMMISSIONER BOYD: Next I have Gary
- 13 Schoonyan of Southern California Edison.
- 14 MR. SCHOONYAN: Thank you, Commissioner
- 15 Boyd. Gary Schoonyan, Southern California Edison.
- 16 And we will be filing comments with regards to the
- 17 comments I make today, and maybe some additional.
- 18 And as a backdrop, I think this hearing,
- 19 this workshop, is very important in addressing the
- 20 issues. And we would hope that the Committee and
- 21 the Commission write a policy report or something,
- or do something with this to basically move
- 23 forward and address the issues, many of which have
- 24 been discussed already, and I'm sure more
- 25 important ones will come to the surface as the

- 1 days roll on.
- 2 Before I begin I want to also appreciate
- 3 the efforts, or give thanks to the efforts of Al,
- 4 Karen, David, and Lynn, and the rest of the Energy
- 5 Commission staff for doing a very thoughtful,
- 6 thorough, timely and complete report and
- 7 assessment.
- 8 And I might add that they were very
- 9 accessible, we had a number of discussions with
- 10 them and what-have-you in trying to basically
- 11 address the issues that are portrayed in the
- 12 assessments made in the particular reports, and we
- 13 really appreciate that.
- In saying that, I want to address the
- 15 questions that were published yesterday, and not
- 16 get into the report itself. It'd probably be the
- 17 easiest way to proceed.
- In essence, I think that what the report
- 19 and everything else look at is one of the key
- 20 objectives and goals is to ensure that reliable
- 21 and affordable natural gas, that in getting this
- 22 the state policies need to be focused on providing
- 23 such through new needed infrastructure.
- 24 And I think that's one of the key
- 25 focuses, is the new needed infrastructure. And

when I say infrastructure I don't just mean supply

- 2 side infrastructure, I also am talking about the
- 3 wires into the business, as well as the end use,
- 4 the demand side of the business.
- 5 This state needs more investment in
- 6 those particular areas. There are issues and
- 7 constraints associated with these three areas, and
- 8 I'll just highlight a few. In the generation area
- 9 in particular, two out of the three utilities are
- 10 not yet credit-worthy, and not able to make long-
- 11 term commitments for new supply.
- 12 If we were credit-worthy there'd be a
- 13 number of things that we'd be able to do,
- including provide nice handouts the way our
- 15 brethren from Sempra Global were able to.
- 16 (laughter)
- But there are still some issues
- 18 associated with generation. The issues of
- 19 customer base is still uncertain. Who are the
- 20 customers we are going to be serving?
- 21 Cost recovery is an uncertain element
- 22 going forward. AB 57 made great inroads in that
- 23 with regards to the utilities contracting for
- 24 power from third parties, providing the upfront
- 25 certainty and what-have-you. There still needs to

1 be, from our perspective, added certainty in cost

- 2 recovery for reasonable costs going forward.
- In the transmission area there's been
- 4 quite a bit of discussion already with regards to
- 5 the time it takes and the uncertainty involved in
- 6 licensing and constructing new transmission.
- 7 There needs to be something done to facilitate the
- 8 timely and coordinated regulatory processes
- 9 associated with the licensing and development of
- 10 new transmission.
- Now whether these changes require
- 12 structural changes, or just changes in the way
- things are administered, we're uncertain at this
- 14 point in time, but presently it appears that
- 15 whatever is going on is broke and needs to be
- 16 enhanced.
- 17 Along that line, with regards to the
- 18 transmission, there also needs to be a concerted
- 19 effort to pursue factual testing and understanding
- 20 of new methods and approaches of enhancing and
- 21 managing the grid.
- I think some of these things have been
- 23 identified, there just needs to be, from our
- 24 perspective, a more thorough approach to testing
- 25 and actually looking at these as alternatives and

1 methods in moving forward in enhancing the

- 2 reliability and cost-effectiveness of the grid.
- 3 In the area of distribution, from our
- 4 perspective we need to build off the good effort
- 5 that this Commission has done with regards to the
- 6 DG, the distributive generation. There's been a
- 7 very factual attempt to try and understand the
- 8 implications of integrating distributive
- 9 generation.
- 10 I think similar sorts of efforts need to
- 11 be made to address the physical constraints
- 12 potential and limitations, and just overall
- implications of all the various demand side,
- 14 dynamic pricing, and continued efforts on DG
- 15 before we do blanket and large-scale endorsements
- of any one particular technology or an approach.
- 17 It's not saying that these things aren't
- 18 good and shouldn't be pursued, but in order to
- 19 basically ensure that they are done in a reliable
- 20 and affordable manner without a lot of cost
- 21 shifting and what-have-you, there needs to be,
- from our perspective, a little more thought given
- 23 in those areas.
- 24 With regards to, I believe it was
- 25 question six, on the requirement of contract

1 commitments. From our perspective there needs to

- 2 be, for infrastructure, at least ten year
- 3 commitments for new infrastructure to receive the
- 4 financing necessary to move forward.
- 5 The issues of the uncertainty associated
- 6 with the customer based cost recovery are very
- 7 important, as I addressed earlier. As well as
- 8 from a contracting perspective, the various
- 9 contracted issues associated with debt
- 10 equivalence, residual value, operating
- 11 flexibility, all of these issues to make sure that
- 12 customers get the long-term value from the
- projects and the facilities that they're paying
- 14 for.
- With regards to core, non-core, whatever
- 16 the market structure is that evolves, it must
- 17 ensure that sufficient infrastructure is developed
- 18 to serve load reliably.
- 19 This was our biggest concern with the
- 20 legislation that went before the Legislature this
- 21 year, the core non-core proposals, is that, from
- 22 our perspective, it was not going to ensure that
- 23 new infrastructure was going to be built.
- 24 And furthermore there was created a
- 25 number of instances of cost-shifting, or at least

1 what we viewed as cost-shifting. From our

- 2 perspective, at this point in time ESP's -- and
- 3 customers for that matter -- have been reluctant
- 4 to engage and enter in to ten-year plus agreements
- 5 that basically are necessary to ensure that new
- 6 supply or demand-side alternatives are
- 7 financeable.
- 8 There was a question regarding
- 9 redundancy, and how much. I think from our
- 10 perspective the issue isn't so much how much
- 11 redundancy is required, it's who is responsible
- 12 for the resource adequacy.
- 13 And this gets to the key market
- 14 structure issues that I think Mr. Pak referred to
- 15 earlier. I mean, if you take a look at just
- 16 Edison right now, we have approximately 15 percent
- of our customers on direct access. Now do we
- 18 procure reserves for them, do we procure power
- just for our own bundled customers with reserves?
- The answer to those questions of impact,
- 21 how much resources we have to go out and obtain on
- the order of over 3,000 megawatts. Now, needless
- 23 to say, that's an issue that needs to be addressed
- 24 and resolved, as to who has the responsibility for
- 25 resource adequacy going forward.

1 in addition there was a question with 2 regards to out-of-state power, and we believe that 3 you should encourage the integration and exchange of resources from outside our state, and whatever 5 environmental requirements that exist in the host locations, they should be honored. 6 With regards to the environmental, 7 there's just a couple of points with regard to 8 questions that were addressed yesterday. From our 9 perspective -- and this has to do with actions 10 that are needed to respond -- from our perspective 11 12 there needs to be a factual audit of the various 13 environmental programs that have existed within 14 the state, and focus on improving their 15 effectiveness. 16 I mean, the only way you can improve programs is to basically evaluate them, and to 17 18 move forward to ensure that the customer gets the most for their investment that they're making. 19 20 For example, the utilities commission 21 has just embarked upon a very extensive audit of

Edison's DSM administration for the last five years. That's fine, we have no problem with that. But similar sorts of audits, factual

audits and assessments need to be made on all the

22

23

24

25

1 various programs such that they can be improved

- 2 upon and gone forward with.
- 3 And the final thing is there was a
- 4 question with regards to taking advantage of
- 5 existing sites. We feel that that is very
- 6 important.
- 7 To the extent that there is existing
- 8 infrastructure out there, be it outdated and old,
- 9 it's still an opportunity to use those sites which
- 10 are very valuable, and try and enhance them
- 11 through repowering and other sorts of things to
- meet not only the reliability but the
- 13 environmental concerns that are facing this state.
- 14 Appreciate the opportunity to address.
- 15 COMMISSIONER BOYD: Thank you. Any
- 16 questions? Chairman Keese.
- 17 CHAIRPERSON KEESE: Gary, you mentioned
- 18 long-term a number of times, and ten years crept
- in there a couple of times, ten years or more than
- 20 ten years. On the issue of new generation, new
- 21 central station generation.
- Is that an opinion that maybe a ten-year
- 23 contract is enough to allow the developer to go
- 24 forward?
- MR. SCHOONYAN: I said ten year plus.

1 From our perspective, and this is just based upon

- 2 experience, that we've looked at over the last
- 3 couple of years --
- 4 CHAIRPERSON KEESE: Right.
- 5 MR. SCHOONYAN: -- that it requires at
- 6 least about a ten year contract to get the
- 7 financeability to move forward with a new
- 8 facility.
- 9 CHAIRPERSON KEESE: I would agree with
- 10 that. If you move to the area of LNG, for
- instance, highly capital-intensive projects,
- 12 overall projects looking at the six, seven, eight
- 13 billion dollar level to put the whole package
- 14 together. Ten years, or are we talking 20 or 30?
- MR. SCHOONYAN: I'm not an expert on
- 16 LNG, but I would envision that when you're talking
- 17 about dollars of those magnitudes that there needs
- 18 to be commitments probably in excess of the ten
- 19 years. At least to cover a large portion of the
- 20 facility cost going forward. But here again, I'm
- 21 not an expert on that.
- 22 CHAIRPERSON KEESE: Right. And anything
- of that nature would have to be approved, as far
- 24 as your organization is concerned, by the PUC. Am
- 25 I correct?

```
1 MR. SCHOONYAN: I believe that's
```

- 2 correct. You're talking about LNG? I mean, we're
- 3 not a gas company.
- 4 CHAIRPERSON KEESE: I'm talking about
- 5 LNG, I'm talking about -- if you got involved in
- 6 part of an LNG process, either owning it or --
- 7 MR. SCHOONYAN: Our involvement would
- 8 have to be approved by the PUC.
- 9 CHAIRPERSON KEESE: -- signing up for 30
- 10 years supply or 20 years, that would have to be
- 11 approved. And likewise for a ten year contract
- for generation from a new facility would require
- 13 PUC approval?
- 14 MR. SCHOONYAN: That is correct. And
- frankly, we wouldn't proceed without it. In
- 16 essence, with AB 57, that provides the assurance
- of cost recovery for entering in to that
- 18 particular agreement going forward.
- 19 CHAIRPERSON KEESE: If we step back a
- 20 couple years, there was a reluctance at the PUC to
- 21 grant utilities anything longer than a year or two
- 22 years. Are you more optimistic now that there
- 23 might be the possibility of getting something
- longer, are those discussions taking place?
- 25 MR. SCHOONYAN: Well, I think it goes

1 beyond the discussions. I think it was the effort

- 2 of the Legislature and the Governor last year with
- 3 AB 57 to provide the statutory framework with
- 4 which to provide that certainty going forward.
- 5 So I think AB 57 played a very key role
- 6 in providing that additional certainty needed to
- 7 enter into arrangements of that nature and that
- 8 duration.
- 9 CHAIRPERSON KEESE: Okay, so we should,
- 10 if that was our conclusion, that we also needed
- 11 long-term arrangements, we would hinge it on
- 12 authority of AB 57 and the suggestion that
- 13 government should look at longer term contracts?
- 14 Is that fair?
- MR. SCHOONYAN: Well, I think definitely
- 16 there should be a look at longer term contracts.
- 17 CHAIRPERSON KEESE: Thank you.
- 18 COMMISSIONER BOYD: Commissioner
- 19 Geesman.
- 20 COMMISSIONER GEESMAN: Gary, I'd just
- 21 take note of the comments you made about grid
- 22 management and distributive generation, and thank
- 23 you and the other California utilities for the
- 24 help that you've provided to our PIER R&D program
- 25 in looking in those areas.

```
1 I think that there are great
```

- 2 opportunities ahead of us in there, and it will
- 3 require all of us working pretty closely together
- 4 to fully harvest those opportunities.
- 5 But in both the transmission R&D and the
- 6 distributive generation R&D we've collectively
- 7 done a pretty good job of attracting federal money
- 8 into the effort as well, and I think are doing
- 9 some things that truly are trendsetting or
- 10 cutting-edge in terms of the rest of the country.
- 11 And I did want to take note of your
- 12 comments there, and extend my commendations to the
- 13 company for the assistance you've provided.
- MR. SCHOONYAN: Thank you.
- 15 CHAIRPERSON KEESE: Gary, let me ask you
- 16 another question. You alluded to core non-core
- 17 and suggested that the proposals that were out
- 18 there were unsatisfactory as far as your company
- 19 was concerned?
- 20 MR. SCHOONYAN: For a couple of key
- 21 reasons. They didn't induce new infrastructure,
- 22 and there was cost-shifting.
- 23 CHAIRPERSON KEESE: One of the
- 24 solutions, one of the ways for getting there,
- 25 rising up through our analysis, has been that

- 1 perhaps a core non-core solution would be
- 2 appropriate. Can you give us the reasons why that
- 3 wouldn't be a good idea?
- 4 MR. SCHOONYAN: Here again, it depends
- 5 on the rules and the structure in which you set
- 6 something up. To the extent it's set up such
- 7 that, let's say, the non-core is basically
- 8 incented to go out and create new infrastructure,
- 9 such that the non-core isn't relying on cost
- 10 shifting or costs being transferred to the bundled
- 11 service customers or those remaining.
- To the extent that there are proper
- 13 coming and going rules that protect the core
- 14 customers, in other words doesn't provide the non-
- 15 core customer a -- how should I say -- a free,
- 16 safe harbor to always come back and flop back and
- 17 forth.
- I mean, from what we've seen, direct
- 19 access -- and here again it's just based upon what
- 20 we've seen -- typically it's done for two reasons.
- 21 Either it's to avoid cost, or to take advantage of
- 22 surpluses. And when those two go away then you
- 23 see them gravitate back towards the bundled
- 24 service.
- 25 And when those opportunities exist they

1 go the other way. I'm not saying that's bad, I'm

- 2 just saying that that's the way it is.
- 3 And from the perspective of the state's
- 4 objective of creating new infrastructure, you need
- 5 to break this cycle of back and forth, because new
- 6 infrastructure isn't going to be built in that
- 7 sort of a fashion, unless the going back and forth
- 8 has pretty good rules associated with what the
- 9 costs are and what the lead times are in moving
- 10 between the two categories.
- 11 CHAIRPERSON KEESE: Well, I would think
- 12 that any discussion of resource adequacy and
- obligations under resource adequacy has got to
- 14 take into consideration what you've discussed,
- that we can't suggest that the utilities are
- 16 obligated to handle resource adequacy for their
- 17 base, and then allow the base to move with
- impunity. We need better rules than we have in
- 19 the past. Thank you.
- MR. SCHOONYAN: Thank you.
- 21 COMMISSIONER BOYD: Gary, you mentioned
- look at existing sites, and I made them my note
- 23 i.e. Brownfield. I don't know if you meant that
- or not, but I guess they are and repowering them
- 25 and etc.

1 Is there some prohibition or are there

- 2 prohibitions against that that caused you to say
- 3 we should look at them? Because I would presume
- 4 they are existing sites, and the idea of
- 5 repowering is always in the mind of a utility or a
- 6 generator who owns a property and perhaps an older
- 7 plant or what-have-you?
- 8 MR. SCHOONYAN: To my knowledge, there
- 9 isn't a prohibition from going forward on
- 10 something like that. The reason I brought it up
- 11 was in the context of, I believe, one of the
- 12 questions that were asked, should the state policy
- 13 be directed toward trying to take advantage of the
- 14 Brownfield sites?
- And I was just reiterating that yes, we
- 16 believe that there are a lot of benefits
- 17 associated with that. Not only do you have the
- 18 transmission, the natural gas infrastructures, and
- many of the other -- the water and what-have-you
- 20 at least -- different types of things available
- 21 with those infrastructures in place to take
- 22 advantage of that, seemed to make a lot of sense.
- 23 COMMISSIONER BOYD: I would agree.
- 24 Thank you. Thank you very much.
- MR. SCHOONYAN: Thank you.

1 COMMISSIONER BOYD: Next I have Kent

- 2 Hampton of Marathon Oil. You should get equal
- 3 time with Sempra now.
- 4 MR. HAMPTON: Thank you, Commissioner.
- 5 My remarks are going to focus on LNG and its
- 6 implications. I don't know whether this is the
- 7 appropriate time to do that. I do have a
- 8 powerpoint that I would like to set up, and that
- 9 would take me about five minutes to do that, so --
- 10 COMMISSIONER BOYD: Why don't you work
- with our staff people in putting your powerpoint
- into the system, and in the meantime I'll call on
- some other folks and que you up when you're ready?
- MR. HAMPTON: Very good. Thank you.
- 15 COMMISSIONER BOYD: Steven Kelly, IEP.
- 16 MR. KELLY: Steven Kelly with the
- 17 Independent Energy Producers, and thank you very
- 18 much for convening this workshop. And before I
- 19 speak I too would like to reiterate my
- 20 congratulations to the staff, particularly Karen
- 21 and Al, for pulling this report together,
- 22 particularly in a timely fashion.
- This is a huge, daunting task that they
- 24 have before them, and I applaud them for being
- 25 able to pull this together.

1 I actually look forward though, because

- 2 I think this will obviously become a periodic
- 3 process, where we will be working on improving the
- 4 report over many years, so this is a very, very,
- 5 good start.
- 6 Last night, just as an opening remark, I
- 7 finally finished the book, Dan Brown's book The
- 8 DaVinci Codes, if anybody's had a chance to read
- 9 that. The parallels -- driving in this morning
- 10 -- about searching for the Holy Grail came to me
- 11 as I was coming across the causeway in terms of
- 12 planning.
- 13 And then I came across --
- 14 COMMISSIONER BOYD: Why do you get time
- 15 to read books?
- MR. KELLY: I was up until late las
- 17 night reading this, once I got into it. But
- anyway, I came in this morning, and I saw this
- 19 room, and you know, the shape is kind of like a
- 20 pentacle, so I'm now thinking there is greater
- 21 convergence going on here than I ever had
- 22 anticipated before, so --.
- I had originally had some thoughts to
- 24 express, and I'm going to try and weave those into
- 25 the questions that the Commissioners released

- 1 yesterday.
- 2 And I want to thank the staff, the
- 3 Commission's staff and the Commissioner's
- 4 themselves, because it helped kind of frame the
- 5 discussions and the thinking that I had, because
- 6 I'll tell you, looking at a huge report like this,
- 7 one that has a great deal of detail in it, is very
- 8 hard to grasp and get your hands around, in terms
- 9 of making a presentation, speaking to you.
- 10 But I would like to address some of the
- 11 major policy issues that I think you need to keep,
- 12 you know, awareness, some of which are in the
- 13 report, some of which may not be.
- 14 First and foremost, and this is
- something I've been thinking about for a long time
- in terms of the needs for this state, the
- 17 infrastructure needs that this report is designed
- 18 to address.
- But one of the things that I think is
- 20 kind of shunted off to the side is the importance
- of public awareness, and ultimately the opposition
- of the public to building new infrastructure, both
- 23 transmission and generation, and particularly on
- 24 the transmission side.
- I think we've talked about it a little

1 bit, but when I think of the stress points and the

- 2 key issues that this state faces moving forward,
- 3 and this agency as well as the other state energy
- 4 agencies will face moving forward in building this
- 5 infrastructure out, is how to convince the public
- 6 about the need for the infrastructure and where to
- 7 put it, and the importance of putting that in.
- 8 And I think that is going to take a very
- 9 strong state role coming from you, the Public
- 10 Utilities Commission, and the Legislature.
- 11 Because as we all know, it's incredibly difficult
- 12 to site new generation, and particularly difficult
- 13 to site needed transmission in a timely manner.
- 14 And the report speaks to how the state
- agencies have gotten their regulatory processes
- 16 fine-tuned, and I would agree with that for the
- most part, particularly regarding generation
- 18 siting. It's a relatively arduous process but it
- 19 works very well, and it comes in on time.
- 20 But the public, I don't think the public
- 21 is quite there despite the crisis on the east
- 22 coast and the energy crisis here, about the need
- 23 for new infrastructure. And I'm not sure that we
- 24 have the wherewithal amongst the policymakers to
- 25 push that infrastructure in a timely manner. So I

1 just bring that to your attention as something

- 2 that the Legislature, I think, needs to hear
- 3 about, as the urgency for that.
- 4 Secondly, I just want to reiterate
- 5 comments that other people have made about the
- 6 critical importance for regulatory and political
- 7 stability and certainty in this, as we move
- 8 forward with infrastructure investments.
- 9 The report alludes to it and speaks to
- 10 it, but I think in terms of a message to the
- 11 Legislature, again, that stability is critical for
- drawing the new investment into California that is
- 13 going to be needed to make sure that we have a
- 14 safe and reliable system.
- 15 California is not an island, either.
- And we need to be aware that what we do, we do in
- 17 the context of regional pressures, regional
- 18 changes.
- 19 And as was alluded to earlier in
- 20 previous remarks, I think it's vitally important
- 21 that this state step up to the plate and work in
- 22 more of a regional context, because what happens
- 23 outside of California impacts us, what we do
- 24 impacts them, and the lack of consistency cross
- 25 the scenes is going to be critical as we move

- 1 forward over the next decades.
- 2 And finally, I just want to emphasize,
- 3 what we're all up here for is the need for
- 4 critical planning. And when I say that I'm really
- 5 talking about timely, periodic, and transparent
- 6 planning.
- 7 And it often seems the case, at least
- 8 from the developers perspective, that right now
- 9 we're looking at an environment where we don't
- 10 really have a good idea of where the state is
- 11 going, or where the UDC's want to be, what kind of
- 12 products they want.
- Most of the utility procurement filings
- 14 are redacted, and the only place that we can
- 15 actually see some of the planning information is
- 16 through your process, which is going to be coming
- out every couple of years.
- 18 It's important to keep confidential,
- 19 competitive information, but it's also important
- 20 to show the developers, give them some expectation
- 21 or anticipation of where the problems are going to
- be, so they can go out and do the field work to
- 23 develop new infrastructure sites.
- 24 If you're developing generation in
- 25 California you need to go out and talk to local

- 1 communities about site development, prior to
- 2 actually competing into an RFP. Which means that
- 3 you need to know, or have some idea, of where the
- 4 needs are going to be, and what kinds of products
- 5 are going to be requested by the utilities in the
- 6 future.
- 7 And I think right now we don't have
- 8 that. In the generation procurement proceeding I
- 9 filed testimony that supported the Energy
- 10 Commission staff on this matter, the need for
- 11 greater awareness and transparency of the
- information related to planning, so that we can
- 13 anticipate your needs, the load's needs, and
- 14 better provide a product to meet that need.
- So moving into the specific questions
- 16 that you posed to us yesterday, and this is
- 17 building on my comments that I've just made that
- 18 are of kind of a general nature. I just have an
- 19 observation regarding the question that relates to
- 20 the role of DSM and dynamic pricing.
- 21 And my observation is that, at the same
- 22 time that the Energy Commission is moving to
- 23 foster these kinds of tools for load shaping and
- 24 whatever, in another context we're actually moving
- 25 to flatten those signals.

I just heard a radio commercial from a

- 2 utility that basically was telling customers,
- 3 rightfully and this is a smart thing, that you can
- 4 flatten out your price signals by buying a flat
- 5 rate over 12 months, we'll average it, and off you
- 6 go.
- 7 I think there's a disconnect a little
- 8 bit in the Commission's desires to use dynamic
- 9 pricing, which requires in some sense pricing
- 10 signals in real time, with the pressure from the
- 11 consumer side, the load side, the residential
- 12 side, to flatten that volatility.
- 13 And that's something that you're going
- 14 to have to work out over time, but I do see some
- 15 competing pressures there that may undermine the
- 16 ability to actually use dynamic pricing on a broad
- 17 scale, because of the consumer -- particularly the
- 18 residential community's interest -- in flattening
- 19 that volatility.
- 20 Regarding the question about long-term
- 21 contracts, or how long they should be. Generally,
- 22 we use ten years as a baseline that you should
- 23 expect if you want to build new infrastructure.
- 24 In my mind, actually the question is more of an
- 25 empirical question that ought to be realized

- 1 through a competitive procurement.
- 2 It could be that somebody would take on
- 3 a infrastructure development, green field
- 4 generation project with a five year contract. I
- 5 don't know. One of the things that I do know is
- 6 we haven't had a series of procurement that would
- 7 reveal that.
- 8 So what I think is foremost in my mind
- 9 is the solution for those kind of questions, is to
- 10 get in the mode of having periodic procurement, so
- 11 we can identify what the competitors are willing
- 12 to do in the marketplace, and that will help
- 13 resolve many of the questions that you pose in
- 14 your question.
- 15 Regarding the core non-core electricity
- 16 market design. Yes, we think that that could be a
- 17 good market design. We have supported that market
- 18 design. We've also supported, though, that if and
- when the state imposes a resource adequacy
- 20 requirement it be imposed on all those serving
- 21 entities so they are the responsible entities.
- 22 I recognize Southern California Edison's
- 23 concern in this regard. I think there are
- 24 probably rules that could be made to protect their
- 25 interest as well as protect the interest in the

- 1 marketplace for having alternatives and options.
- 2 But the core non-core model is one that seems to
- 3 be working on the gas side, and I think with
- 4 proper rules it could work on the electricity
- 5 side.
- 6 Regarding redundancy, and should we
- 7 build into the system related to capacity, the
- 8 issue about resource adequacy in many respects is
- 9 how much insurance do you want to pay for to make
- 10 sure that you mitigate volatility in the short-
- 11 term markets. And that's a question that's going
- to vary by the load serving entity, probably.
- 13 They might all have different questions on that.
- 14 The real key in our mind is making sure
- 15 that the load-serving entities are responsible for
- 16 the choice that they make on the level of resource
- 17 adequacy. And hold them to that. And one of the
- downsides of being resource inadequate is you
- often face very high prices in real time as you
- 20 try to fill that need.
- In the short term, where we are now,
- 22 we're tying to move from a rather chaotic market
- 23 structure to a market structure that's been more
- 24 stable and characterized with a resource adequacy
- 25 requirement. We've supported that. We've

1 advocated at the PUC for adopting the, I think

- 2 it's the Power Authority's recommendations on
- 3 that, as a starting point.
- And then, ultimately, you'll let the
- 5 load serving entities determine what level of
- 6 insurance they need. And I want to reiterate,
- 7 too, on the question regarding the gas price
- 8 spikes and the gas indices. For the most part,
- 9 our impression is that the gas markets have been
- 10 working over a number of years, as that was de-
- 11 regulated and allowed for more competitive market
- 12 forces to govern that.
- 13 There were some recommendations in a
- 14 previous report that spoke to the need for greater
- 15 state intervention in the gas markets. I think we
- 16 filed comments back then, and I refer you back to
- 17 those comments, where we indicated that, from our
- 18 perspective, there didn't seem to be a need for
- 19 greater state intervention, there just seemed to
- 20 be a need for greater signals to the generation
- 21 community about how much gas they're going to need
- 22 to buy to procure, to serve load.
- 23 And this is where the long-term
- 24 contracts come in. If you have a ten or 15-year
- 25 contract, you're prudently going to buy gas to

1 support it, and you're going to make sure that you

- 2 have it available to you when you need it.
- 3 What has been chaotic over the last
- 4 couple of years is that nobody had the certainty
- 5 that they were going to be there, needed in the
- 6 next couple of years, so you might not buy as much
- 7 gas on a long-term basis. Long-term contracts, I
- 8 think, will ultimately solve those resource
- 9 issues.
- The other area that you highlighted in
- 11 your questions is an area related to the
- 12 environmental issues, and questions regarding
- 13 environmental performance of the state energy
- 14 system. And do the existing laws and regulations
- 15 provide a basis for the Commission to require any
- 16 power plant Applicant to agree to certain
- 17 technology designs.
- 18 Here again, I want to identify the
- importance of defining the product that the state
- 20 or the utilities want up front. If you want dry
- 21 cooling as the technology for producing
- 22 electricity, that can be prescribed in an RFP,
- 23 that the utilities would let.
- 24 And then everybody would have the
- 25 opportunity to offer up the best project that has

1 that specific technology, and it also would reveal

- 2 the price to do that, through that competitive
- 3 competition.
- 4 The worst thing is to have a competitive
- 5 solicitation, have generators bid in that
- 6 competitive solicitation and win, and then come to
- 7 the Energy Commission at the siting process and
- 8 have somebody impose a new type of technology on
- 9 that generation, at that point in time, that's
- 10 going to cost an additional \$40 or \$50 million or
- 11 whatever it is.
- That puts a huge cramp on the generators
- who were bidding in the RFP process at the
- 14 beginning. So I would urge you, to the extent
- 15 that you think these innovative technologies are
- 16 important, you can integrate those into the
- 17 procurement process, so that people can plan for
- it and prepare and design a project around it, in
- 19 advance of, as a function of bidding.
- Then, when they come to you, the issue
- 21 about imposing that new technology will be
- 22 irrelevant, it's already been costed into the
- 23 project. It becomes a problem later, when you
- 24 start adding on to the regulatory process, the
- 25 siting process, a lot of regulatory overlay.

1 Because that crimps, obviously it would

- 2 not have been anticipated. So I would just
- 3 emphasize the need for, the extent to which the
- 4 state or the utilities have desires on certain
- 5 types of products, and technologies related to
- 6 those products, specification in the RFP process
- 7 provides a means to obtain it, but it's got to be
- 8 clear and it's got to be consistent, and we
- 9 recommend using competitive solicitation in order
- 10 to make sure that you get the lowest cost product
- 11 to serve that need.
- 12 And I'm happy to answer any questions
- 13 you might have.
- 14 COMMISSIONER BOYD: Thank you, Mr.
- 15 Kelly. Any questions? Commissioner Geesman.
- 16 COMMISSIONER GEESMAN: Steven, has your
- industry sat down, or attempted to sit down, with
- 18 Edison or the other utilities to try and see if
- there is some common ground as to what agreed-upon
- 20 rules in a core non-core market format would look
- 21 like?
- MR. KELLY: Other than the legislation
- last year that addressed this we really haven't
- 24 had much dialogue. I think it's something that
- 25 would be important and useful. We have been

- 1 working with the, some of the business
- 2 associations in the state, that I think have had
- 3 more extensive discussions with the utilities on
- 4 this.
- 5 And we've supported those business
- 6 groups on this model. But we'd be happy to work
- 7 with them on this.
- 8 COMMISSIONER GEESMAN: Those are
- 9 generally the customer groups, right?
- MR. KELLY: Yes.
- 11 COMMISSIONER GEESMAN: It just occurs to
- 12 me that, you know, for six or seven months now, a
- variety of people from all around the spectrum
- 14 have at least acknowledged their willingness to
- 15 entertain a core non-core system, and yet the only
- 16 time dialogue appears to take place is in the heat
- of some legislation, or in the middle of the night
- in some bar somewhere. It would probably be --
- 19 MR. KELLY: They're the same, I thought.
- 20 COMMISSIONER GEESMAN: -- a constructive
- 21 use of everybody's time.
- MR. KELLY: I think that's a good
- 23 observation. When legislation gets posed, it gets
- 24 embroiled in that process, and things have a
- 25 tendency to get haywire, and people get very

1 reactive. So I think that's a very good

- 2 observation.
- 3 And along those same lines, you had
- 4 asked a question which I forgot to respond to,
- 5 which is whether legislative actions are needed
- 6 going forward to meet the challenges that we have
- 7 in this.
- 8 And there are a couple that I would
- 9 recommend that we consider. And one is, I would
- 10 agree with the comments earlier, that the siting
- 11 process needs to be perfected -- and here I'm
- 12 talking about the siting process for generation
- 13 and mostly transmission. And the concept of one
- 14 site transmission siting planning place is
- something that's floated around awhile.
- And it now may be timely to have the
- 17 pre-discussions before the Legislature on that
- 18 issue. Because siting is going to be critical.
- 19 And one of the components of siting may be an
- 20 expansion of eminent domain authority, to allow
- 21 alternative to acquire land to build transmission.
- Or sites for generation might be needed,
- 23 as determined by a state agency that thought it
- 24 was important. So I think that would be a
- 25 component of it. So that kind of legislation is

- 1 something that I think needs to be discussed.
- 2 I think the concepts need to be
- 3 discussed prior to drafting the legislation, and
- 4 obviously getting a suitable author who can manage
- 5 that process. But we would certainly welcome the
- 6 opportunity to sit down and talk about those kinds
- 7 of issues with the utilities or anybody else on
- 8 how to do that, and what are the components of
- 9 that.
- 10 I know the Legislature is looking at,
- 11 you know, kind of an energy bill for next year.
- 12 The key Chairman of the committees that would kind
- of pull all the pieces together. So we've been
- 14 thinking about this for some time now. And maybe
- 15 through your leadership we could create a forum
- 16 for that.
- 17 COMMISSIONER BOYD: Thank you, Steven.
- 18 Mr. Hampton, are you set up? Okay, here's what
- 19 I'm going to do. We have a gentleman here from
- 20 the Cal ISO that has a time constraint.
- 21 And although I would have liked to have
- 22 had him after the staff's transmission
- 23 presentation, which I was presuming to do right
- 24 after lunch, I will call on Mr. Kristov now.
- 25 And then we will break for lunch, and

1 then we will hear from Mr. Hampton and then we

- 2 will hear from the staff on the transmission
- 3 issue, and then we will hear from those folks who
- 4 have indicated on their blue card they wanted to
- 5 address transmission.
- 6 So, thank you very much Mr. Kristov for
- 7 kind of going out of turn. But I recognize you
- 8 have a time constraint.
- 9 MR. KRISTOV: Thank you very much, I
- 10 appreciate the opportunity to speak. Good
- 11 morning, Commissioners, and it's good to see a
- 12 number of old friends here. I was very glad to
- see the scope and quality of this energy policy
- 14 report.
- 15 Having worked at the Commission I've
- 16 been well aware of the strength of this agency in
- 17 being able to take a big picture view of
- 18 California's electricity situation, and provide
- 19 excellent policy recommendations.
- 20 And from the crisis, having lived
- 21 through sort of the center of the vortex of it,
- 22 I'm well aware that that's exactly what's needed
- 23 at this point comprehensively across the various
- 24 entities that are in the energy supply business,
- and the relationships among types of energy.

1 What I wanted to talk about specifically

- 2 is resource adequacy, because that's an activity
- 3 that's near and dear to our hearts with the new
- 4 market design we're trying to put into place.
- 5 In the last couple of years my role at
- 6 the ISO has been primarily to develop the market
- 7 design proposal that ISO just recently filed at
- 8 FERC, known as MDO2, market design 2002 -- we've
- 9 even suggested that the name ought to change,
- 10 since it's not '02 anymore.
- But we decided that we'll keep one name
- 12 for the project, and then once the project is
- implemented that name goes away. That proposal
- 14 recognizes that a number of things were deficient
- in the original ISO market design, but in
- 16 particular, and where it links up with resource
- 17 adequacy is the point that resource adequacy is
- 18 ultimately a real time concept.
- 19 It means that in real time there is
- 20 enough power to keep everyone's lights on, to keep
- 21 businesses functioning, and that that power is
- 22 available at a reasonable and stable and
- 23 predictable price, that there's not too much
- 24 volatility in that price and so on.
- 25 And really, it's in real time that

1 resource adequacy becomes visible to households

- 2 and to businesses, even though there's a lot of
- 3 planning that goes into ensuring that that
- 4 planning process unfortunately becomes most
- 5 visible when it doesn't work.
- 6 So, from the ISO's point of view, again
- 7 going back to our role in the whole statewide
- 8 process, we believe starting with open access and
- 9 really the restructuring that created the ISO, our
- 10 business is real time dispatch of the system.
- 11 That's reliability and real time
- 12 dispatch, which means that there's something there
- 13 to dispatch when there's loadmaking demands on the
- 14 system we have the resources available to us that
- 15 we can issue instructions to and that will respond
- 16 and that will meet the demand.
- 17 So, given that as a background, and I
- 18 recognize that I'm repeating some things that you
- 19 already understand and know, but I want to repeat
- 20 them for emphasis, because I thin that, as the
- 21 resource adequacy process goes forward, it's
- 22 important to keep in mind this linkage between
- 23 planning 20 years out and 10 years out and so on
- 24 and ultimately showing up in real time and linking
- 25 to the ISO real time markets.

```
When we originally created our MD02
```

- 2 proposal that we filed in May of 2002, we had our
- 3 version of an attempt to address resource
- 4 adequacy, which essentially involved a month ahead
- 5 review of load serving entities obligations, and
- 6 how they met those obligations. It was known as
- 7 ACAP, or available capacity obligation.
- 8 And while we don't necessarily believe
- 9 that that's in every detail the right answer to
- 10 the problem, we do believe that it has a number of
- 11 concepts that need to be embedded in whatever
- 12 right answers the state comes up with.
- 13 And at the request of state entities,
- 14 ISO, in recognition of the jurisdictional issues,
- 15 we removed that. So right now the proposal that we
- 16 filed in July has some, what I would consider
- 17 provisional types of obligations that relate to
- 18 resource adequacy.
- 19 We are relying on a must-offer
- 20 obligation created by FERC over two years ago. We
- 21 are requesting that FERC extend that obligation
- into the day ahead time frame, so that we have
- 23 more visibility on available resources on a day
- 24 ahead basis.
- 25 And we are offering a type of

1 availability payment in the event that we have to

- 2 commit resources that aren't otherwise committed,
- 3 we would give them an availability payment as
- 4 compensation for standing by to be available to
- 5 serve load in real time. These things are
- 6 substitutes, and not necessarily very strong
- 7 substitutes, but the best within the parameters we
- 8 have to operate for a fully fledged resource
- 9 adequacy program for the state.
- 10 So, as we look at the provisions in
- 11 place, and the state of resource adequacy
- 12 proceedings going on, we are left with what I feel
- is an open question about how much reliance will
- 14 there be on spot markets, which ultimately
- 15 translates availability of resources for the ISO
- 16 $\,$ to commit on a day ahead basis and to dispatch in
- 17 real time.
- 18 And to the extent that we create rules
- 19 and a situation that encourages reliance on spot
- 20 markets, all the more is the risk on the ISO to
- 21 ensure that we can keep the lights on. And all
- the more is the tendency to place us in a position
- 23 which we think places a state policymaking burden
- on us that we really shouldn't have, which is what
- 25 decision do we make in real time when there is a

- 1 shortage?
- 2 Do we procure at any price in order to
- 3 keep the lights on, because our mandate is
- 4 reliability and we're going to make sure we can do
- 5 it, including out of market purchases, going out
- of state to get supplies that are under no
- 7 obligation to bid into California and may not --
- 8 especially if they're aware that it may be a short
- 9 situation.
- 10 Or is there a price at which we should
- 11 stop making these out of market transactions and
- declare a stage three emergency and order
- 13 curtailments? That's a very unpleasant situation
- 14 to be in. And I think ultimately that's a piece
- of the policy guidance that needs to come out of a
- 16 resource adequacy activity.
- 17 In that regard, in your report on page
- 18 131, you've listed some key principles of resource
- 19 adequacy. Number six on that list is the
- 20 recognition of providing guidance to the ISO and
- 21 load-serving entities as to what their real time
- 22 behavior should be in the event of having a
- 23 shortage in real time.
- I believe the principles you've laid out
- 25 there are very good ones, and I definitely endorse

- 1 them.
- 2 And the only modification I should
- 3 suggest is to make more explicit the fact that
- 4 resource adequacy is and needs to be an integrated
- 5 process that goes all the way from long-term 10 or
- 6 20 years out, up to every moment in real time, and
- 7 that somehow that has to be seamless in the sense
- 8 that resources designated, procured in advance,
- 9 have an obligation to participate in real time, to
- 10 be scheduled on a day ahead basis in the ISO,
- 11 and/or bid into the ISO market, be available for
- 12 real time dispatch.
- So as a final note I would mention that
- 14 another staff member at ISO has submitted some
- 15 comments about the supply adequacy assessment, and
- 16 your report has stated 2007 as a year to be
- 17 concerned about. Some of the comments that our
- 18 staff person made suggested that there may be
- 19 reason to be concerned even a little bit earlier
- 20 than that.
- 21 But even if we don't have to worry until
- 22 2007 I think now is the time to provide the
- 23 mechanisms that will get the required contracts in
- 24 place, resources built, whatever, so that by 2007
- 25 we don't have to worry.

1 That's the extent of my comments at this

- 2 point. Be happy to answer some questions.
- 3 COMMISSIONER BOYD: Thank you. Any
- 4 questions? Comments? Thank you very much for the
- 5 input. Thank you for the ISO's participation in
- 6 our process today.
- 7 With that, as I indicated, we're now
- 8 going to break for lunch for an hour. When we
- 9 come back I'll keep my commitment to Mr. Hampton,
- 10 to let him make his presentation. Followed by the
- 11 staff's presentation on transmission planning.
- 12 I've been asked by my loyal staff here
- 13 to mention that, as a lunch option on Tuesday's
- there's a market across the street in the park.
- 15 And for anyone that wants to walk to the park and
- 16 find a couple of places to eat, there are luncheon
- 17 options over there, or you can just go to all the
- 18 other standard fare around here. Thank you, see
- 19 you at 1:00.
- 20 (Off the record.)
- 21 COMMISSIONER BOYD: Back on the record.
- 22 We'll pick up to where I said we would after we
- 23 broke for lunch, and we're going to hear from Mr.
- 24 Hampton from Marathon Oil Company.
- MR. HAMPTON: Thank you, Commissioner.

1 COMMISSIONER BOYD: Who brought his own

- 2 computer, his own projector, he's wired for sound.
- 3 This is something.
- 4 MR. HAMPTON: The whole bit. I
- 5 appreciate your patience here. We have a couple
- 6 of maps here that help explain the gas
- 7 transmission access issues, and a powerpoint is
- 8 really the most appropriate way to do that. So I
- 9 appreciate your indulgence.
- 10 As I said, I represent Marathon Oil
- 11 company. And we are one of the LNG developers in
- 12 Baja California, near Tijuana. And what I'd like
- 13 to do today in addition to complementing your
- 14 staff on an excellent job with their study and
- their assessment, I wanted to take it a couple of
- 16 steps further and talk about some of the
- 17 implications with particular respect to LNG.
- 18 So, with that, we'll get into the first
- 19 slide. As I say, the first thing that I want to
- 20 say is that Marathon is in general in agreement
- 21 with a lot of the, not all but a lot of the issues
- 22 that the CEC had put into their study.
- 23 I think that their views on markets are
- in line with our own views. And the other thing
- 25 that we very much like to see is an integrated

1 approach to both gas and power. We think that's

- very encouraging, and the fact that you're looking
- 3 beyond just the California border. I think that's
- 4 very important for good results.
- 5 Secondly, we are, or thirdly, we are
- 6 encouraged that there are others besides ourselves
- 7 that see some value in bringing LNG into this
- 8 region.
- 9 Fourth, we agree that long-term
- 10 contracts have their place. And I'll talk a
- 11 little bit more about this in a minute, but LNG
- 12 certainly is a large investment, as was observed
- 13 earlier today. The problem is that in many
- instances ten-year contracts are more a dream than
- 15 a reality these days.
- And looking at it from that perspective,
- 17 what we're really after in many instances is
- 18 liquidity, and the ability to find backup buyers
- if in fact one buyer on one particular day doesn't
- 20 need the LNG.
- 21 And so I'm going to talk about the
- 22 prospects for developing hubs, let's say in the
- 23 Los Angeles city gate, which would provide a lot
- of the liquidity we need, and would probably
- 25 shorten the term of some of these long-term

- 1 contracts that might otherwise be needed.
- 2 Lastly, I think we need to take a look
- 3 at how we might optimize and reuse the existing
- 4 gas pipeline system. There are issues of pipeline
- 5 access, which right now LNG suppliers do not have
- 6 access to either the San Diego system or to the
- 7 SoCal system, and we think that needs to be
- 8 addressed.
- 9 One of the things that LNG can also do
- 10 is serve as a storage facility, close in. Ours
- 11 particularly is very close to San Diego. It was
- 12 mentioned this morning that San Diego has some
- 13 problems in reliability, and having storage close
- in certainly has some appeal.
- 15 And lastly I'll mention gas quality. It
- is an issue because generally LNG, in the Pacific
- 17 Basin, is high BTU content. Both Japan and Korea
- 18 have typically liked high BTU gas, because it was
- 19 transportation efficient. You could jam a lot of
- 20 BTU's into a small area, and that's not going to
- 21 work in California.
- That being said, we do think the
- 23 situation is manageable. There are lots of things
- 24 that you can do to manage that BTU content. But
- 25 we have overlapping jurisdictions. We have all of

```
1 the pipelines involved, which have their own gas
```

- 2 quality specs, and some of them are overlapping.
- 3 Someone mentioned CARB this morning,
- 4 they have a say in this, and potentially SCAQMD
- 5 also have a say in that, and they're not all
- 6 consistent. What we really need is some certainty
- 7 as to what those standards are going to be, and I
- 8 think that would help more than anything else.
- 9 With respect to LNG, our view is that
- 10 LNG is a critical wedge supply that many of the
- 11 traditional basins, with perhaps the Rockies
- 12 excepted, are going to have a difficult time with
- 13 keeping up with increases in demand.
- 14 And so you're going to have a bridge
- 15 fuel here that gets us between now and the time
- 16 that Alaskan gas comes on, which we believe is at
- 17 least ten years, if not further, away.
- 18 And particularly on the west coast, I
- 19 think that can be done in a relatively short
- 20 period of time. San Diego's mayor came out with a
- 21 statement earlier this year that they were looking
- for energy independence. I guess in some senses
- 23 that's a laudable goal.
- I don't know if you can ever be energy
- 25 independent, but you can certainly reduce your

1 exposure to swings in supply, to disruptions from

- 2 pipelines, by diversifying your portfolio. And I
- 3 think that's what LNG really does.
- 4 There are lots of countries in the
- 5 Pacific Rim that are in exactly the opposite
- 6 situation. They have lots of natural gas reserve,
- 7 but they have no market. And so the prospect of
- 8 earning U.S. dollars, a hard currency, is very
- 9 attractive to them.
- Now certainly some of these companies
- 11 have political instability. They have some issues
- 12 that we might in other circumstances try to avoid,
- 13 but we found -- we've been operating in countries
- 14 like Libya and Syria and other areas -- and we've
- found that, with respect to petroleum revenues,
- 16 regardless of who is in power, there is a very
- 17 keen incentive to keep the money tap going.
- 18 And so, this may offer more stability
- 19 than you first think. And secondly, if you -- as
- 20 we are going to do -- have a diverse portfolio,
- 21 you don't put all your energy eggs in one basket,
- you diversify the sources, that also offers some
- 23 insurance against supply disruptions.
- Now one of the appeals to Baja, I always
- 25 get asked this question, why Baja, what is

```
1 particularly attractive about that. But it has
```

- 2 infrastructure, it has existing pipe. It's brand
- 3 new pipe, most of it was put in place, Eric's
- 4 company put it in place here last fall, and it
- 5 wires up the Baja area to the U.S. gas grid.
- Now right now it's flowing from east to
- 7 west. But forget about who wins the LNG beauty
- 8 contest, whether it's Sempra, or whether it's
- 9 Shell, or whether it's Marathon, Chevron, Texaco,
- 10 I think the chances are very good that, with the
- variety of different approaches we have, they're
- 12 all different, all different locations.
- Some are offshore schemes, some are
- onshore schemes, that one of us is going to have
- 15 the right combination and bring LNG in here.
- So I would agree with Sempra's comment
- 17 that we ought to be looking at perhaps the impact
- of an additional 500 to 700 million cubic feet a
- day in the back door, in the south end of the
- 20 system. And I'm going to talk a little bit more
- 21 about that in the next couple of slides.
- 22 If LNG comes in that flow then reverses.
- 23 And as some of you know, there is an open season
- 24 going on, the Sempra and PGT pipelines are right
- 25 now conducting an open season, which would do just

```
1 exactly that, which would reverse the flow,
```

- 2 bringing LNG in here, and bring it up to Blythe.
- 3 Now when I first started looking at this
- 4 project a couple of years ago, my first response
- 5 was well, why would you want to do that, why would
- 6 you want to go all the way around -- I mean,
- 7 nothing wrong with Blythe Ehrenberg, but it's not
- 8 exactly in the center of the universe.
- 9 Wouldn't it make more sense to bring it
- 10 up into San Diego Gas and electric system? Well,
- 11 for a variety of reasons, this point right here at
- 12 Otay Mesa is closed off. And so that's not a
- 13 realistic option at this point.
- 14 The open season deadlines are upon us
- 15 here on the 15th of September. All of the LNG
- 16 producers are going to have to submit bids for
- 17 capacity to these pipelines, and I doubt if we're
- 18 going to have this issue of access to Otay Mesa
- 19 worked out by then.
- Now one of the things that all of us
- 21 require is market access. Consumers want access
- 22 as well. So it's a push/pull kind of process.
- 23 But the last thing we want to have happen is to
- 24 haul LNG 7,000 miles across the Pacific, and then
- 25 to have it stranded on the beaches of Tijuana.

- 1 That doesn't make any sense for anyone.
- 2 So we need firm transport, we need
- 3 access to markets. And as I said earlier, right
- 4 now we don't have the right to lease capacity on
- 5 either the San Diego or the SoCal systems. There
- 6 are some things going on right now before the CPUC
- 7 to try to address that, but that is a key issue
- 8 for all of us.
- 9 What we would like to see, in addition
- 10 to this sort of flow, which certainly is great for
- 11 Palos Verdes and the power plants out there, but
- we'd like to see Otay opened up, and perhaps the
- 13 Imperial Valley line, so that others could get
- 14 benefit.
- 15 And the thing that is amazing to me is
- 16 that Los Angeles does not have a city gate price.
- 17 San Francisco has a city gate price, Chicago has a
- 18 city gate price, New York has a city gate price,
- 19 why not Los Angeles?
- 20 And think about it for a minute, if
- 21 you're a consumer in Los Angeles, and you're tying
- 22 to second-guess where is that gas going to come
- 23 from, is it going to come from the Rockies, is
- that going to be the cheapest source in 2007?
- 25 Well, maybe, maybe not.

1 Is is going to be the San Juan Basin,

- 2 that's traditionally been the cheapest source.
- 3 Well, maybe, maybe not. Is LNG going to come in?
- I hope so, but I've been wrong before. There's a
- 5 risk associated with holding that capacity, and
- 6 taking a risk on one of those receipt points.
- 7 And it makes more sense to me for LNG
- 8 suppliers to hold that capacity going up here.
- 9 Create a city gate price, consumers can shorten
- 10 their path, and they've got more choices, and now
- 11 they have two backbones, not just one. So they
- 12 have competition, they have an alternative to the
- 13 El Paso pipeline, which has caused us all so many
- 14 problems.
- 15 California, I know, has had painful
- 16 experience with El Paso. As producer, I want to
- say we've had the same problems. That's probably
- one of the most difficult pipes to ship on. So it
- works both ways.
- 20 What are the benefits to California for
- 21 this kind of a scheme? Well, obviously opening up
- 22 the Otay Mesa site could reduce dependence on El
- 23 Paso, as I mentioned. It could reduce existing
- 24 capacity on San Diego Gas and electric.
- Now, San Diego Gas and Electric has

1 never been designed as a mainline, off-system

- 2 pipeline. It was a distribution system. It was
- 3 designed to flow from north to south. But there's
- 4 no reason why that can't be turned around and put
- 5 into mainline service. Indeed, there are a few
- 6 steps that have already been taken in that
- 7 respect.
- 8 The other thing that it does, is if you
- 9 now bring gas in this direction it unloads the
- 10 SoCal backbone. You're now able, with no
- 11 additional cost, to reuse that to bring in
- 12 additional gas.
- 13 Secondly, benefits for California.
- 14 There are, as you mentioned, as the staff has
- pointed out, there are a lot of power plants
- 16 either under way or already built in the Palo
- 17 Verde area. And they may take gas and use it that
- 18 would otherwise flow west into California. And
- 19 that's good.
- 20 However, it would also be nice to be
- 21 able to fill that in. And that's exactly what LNG
- 22 could do, it fills that void. And so it
- 23 complements what's going on the Palo Verde area.
- Now the other question I always get is
- 25 what impact LNG will have on SoCal border prices.

1 And I don't need to tell you that has been a

- 2 difficult situation. We have seen a very rough
- 3 ride. Lots of volatility, very high prices. And
- 4 these high prices are not good for you, but
- 5 they're not good for producers as well.
- 6 They're too high right now. We have
- 7 killed a lot of demand. And what's made it even
- 8 more difficult is that, to use an old song,
- 9 California prices have kind of gone their own way.
- 10 There has been a disconnect often between the
- 11 Henry Hub benchmark gas price, and what's gone on
- 12 at the SoCal border.
- And there are a variety of reasons for
- 14 that. Be it pipelines, the new pipeline certainly
- 15 had its impact. The section 29 San Juan coal seam
- 16 boom, back in the mid-90's, for those of you who
- 17 remember that. And obviously the California
- 18 energy prices. And that often compounds the
- 19 volatility that's already inherent in the Henry
- 20 Hub price many times over.
- 21 What is needed? Well, alternative to
- the El Paso pipeline would certainly be a good
- 23 place to start. This is interesting, I had no
- 24 idea what Sempra was going to present this
- 25 morning. Their numbers are very close to mine.

1 This is intended to show you kind of the

- 2 threshold price. At what point does LNG start to
- 3 make economic sense to producers over in Indonesia
- 4 or Alaska or South America. And if you allow
- 5 producers a 50 cent wellhead net back, that's not
- 6 a lot, but it's more than, better than leaving it
- 7 in the ground.
- 8 Then you can bring natural gas in to the
- 9 SoCal border at approximately \$3.75. Then you're
- 10 close, very close to the SoCal price.
- 11 VOICE: What are you pricing?
- 12 MR. HAMPTON: I'm pricing LNG delivered
- into the SoCal border. And I am adding up these
- various cost components from public sources,
- allowing a 50 cent net back to producers overseas.
- 16 That includes shipping, that includes re-gas, it
- includes liquefaction, all of the cost components.
- Now is this a forecast? No, it isn't.
- 19 It's just an illustration that shows the impacts
- of improved economics, reduced costs, larger
- 21 vessels, and if you compare that 3.75 with the
- Henry Hub price, you can see that that fits very
- 23 well.
- 24 There are often many times where this
- 25 can compete. And by adding additional capacity, I

1 will argue, will reduce volatility in California.

- 2 And in conclusion, and I apologize for
- 3 taking all this time, I do believe that LNG
- 4 supplies can lower energy costs throughout Baja
- 5 and California.
- 6 California consumers will benefit from
- 7 enhanced competition, lower prices, and a
- 8 diversity of supply sources. Existing pipeline
- 9 infrastructure ought and can be rescued and
- 10 upgraded, providing LNG shippers are allowed
- 11 access to certain basic pipelines.
- 12 The creation of a Los Angeles city gate
- 13 hub I think is key to this. Because, like many
- 14 other cities, this will promote competition and it
- will lower costs to consumers. And it will also
- 16 provide the liquidity we need, so that perhaps we
- don't have to have ten year terms.
- 18 Lastly, LNG provides some storage
- 19 services that you otherwise wouldn't get. And
- 20 with our particular facility we're also looking at
- 21 increasing efficiency on the power gen side.
- We've got an integrated gas, water, and power
- 23 concept, and putting those all together in one
- 24 site makes a lot of sense from an efficiency
- 25 standpoint.

1 With that, I thank you for your time,

- 2 sorry to drop the mike here, and I'll take any
- 3 questions.
- 4 COMMISSIONER BOYD: Thank you. One
- 5 question. On your sources of gas and LNG for the
- 6 west coast, you didn't reference LNG from Alaska.
- 7 You did reference arctic gas, but I think that was
- 8 just natural gas via some pipeline, unless I read
- 9 it wrong.
- 10 What's your view on LNG from Alaska,
- 11 since the Alaskans have taken a lot of political
- 12 and otherwise action during the last year to make
- 13 that a reality?
- MR. HAMPTON: There are two supply
- basins for Alaska. The north slope is the one
- 16 that I mentioned in that portfolio chart. And for
- 17 a variety of reasons I don't think that is an
- 18 economic alternative for LNG. Constructing a
- 19 pipeline from the north slope down to northeast of
- 20 Alberta, from a producer's standpoint, makes a lot
- 21 more sense.
- 22 With respect to Cook Inlet supply -- and
- 23 we have been a Cook Inlet producer for a long time
- 24 -- it makes a lot of sense from a variety of
- 25 standpoints. It is probably the closest supply.

1 Indeed, when we started looking for markets for

- 2 that gas back in the 1960's, California was
- 3 certainly one of the first places we considered.
- 4 It also has the benefit of being very
- 5 high quality. It is 99 percent methane. There
- 6 would be no issues of gas quality with that gas.
- 7 The problem is that it's contracted with
- 8 the Japanese, with Tokyo Gas and Tokyo Electric,
- 9 and it would not be available until 2009 at the
- 10 earliest. After 2009 certainly it would be in the
- 11 mix.
- 12 COMMISSIONER BOYD: So you don't see the
- 13 north slope to Valdez pipeline and LNG facility as
- 14 economically viable?
- MR. HAMPTON: No, I don't sir. The
- 16 producers who have owned those reserves have shown
- 17 very little interest. The people that are
- developing that project, Yukon Pacific in
- 19 particular, have been working on that for years.
- 20 But they own no reserves up there.
- 21 If you look at it from the perspective
- of a producer, of a north slope producer, his best
- 23 net back is an overland pipeline that would
- 24 connect into pipes in Alberta, and then would go
- 25 from there to California or Chicago.

1 COMMISSIONER BOYD: If they get the

- 2 subsidies in the energy bill.
- 3 MR. HAMPTON: Well, that's a whole
- 4 different issue, yes.
- 5 COMMISSIONER BOYD: Thank you. Any
- 6 other questions? Chairman Keese.
- 7 CHAIRPERSON KEESE: I noticed in the
- 8 Sempra presentation this morning that, I guess
- 9 you'd say the base case, was a billion cubic feet
- 10 per day. And they suggested that, as an
- alternative we should look at half of that, 500.
- 12 You were using the term 500 or 750, and
- 13 you're talking only about the use of this gas in
- 14 the U.S. When you're talking about 500 or 750 are
- 15 you talking about a billion cubic feet and then a
- 16 portion of that is going to stay in Mexico?
- 17 MR. HAMPTON: Exactly. This is a bi-
- 18 national project. Most of them are, with the
- 19 exception of Mitsubishi's at Long Beach. And a
- 20 significant amount of this gas would be burned in
- 21 Baja. In fact, if you ask the Mexican
- 22 authorities, they believe that this ought to be
- 23 going to Baja first and then California gets
- 24 what's left over.
- Our projections show a very healthy and

1 very growing demand for natural gas in that part

- of the world. Population growth south of the
- 3 border has been phenomenal, all along the border.
- 4 They're looking at population growth of 7 or 8
- 5 percent per year, and they're already underserved
- 6 on infrastructure right now. They need both
- 7 natural gas and power.
- 8 And so, to answer your question, a BCF a
- 9 day for benchmarking purchases I think would be an
- 10 excellent start, but probably half of that is
- 11 going to stay in Mexico.
- 12 CHAIRPERSON KEESE: So it would be an
- 13 appropriate assumption for anybody who's planning
- an LNG terminal on the west coast is thinking in
- 15 the terms of a BCF a day?
- MR. HAMPTON: Yes, sir. Ours is
- 17 slightly smaller than that to begin with, I think
- 18 Sempra's is as well. Shell's is 1.3 BCF a day.
- 19 Eric is going to give you a rundown on the various
- 20 sizes and proposals here later on.
- 21 CHAIRPERSON KEESE: And your, we're
- 22 certainly not going to see all the terminals that
- 23 are in discussion built on the west coast. In
- your analysis, do you have a number? Can we
- 25 handle two BCF a day? Let's say there were two

1 terminals built on the west coast at a billion a

- piece, would that probably discourage a third?
- 3 Let me phrase it that way.
- 4 MR. HAMPTON: It would. In 2007 it's
- 5 tough to see how there's enough market for two BCF
- 6 a day additional.
- 7 CHAIRPERSON KEESE: For two?
- 8 MR. HAMPTON: For two billion cubic feet
- 9 a day, regardless whether it's one terminal or two
- 10 terminals.
- 11 CHAIRPERSON KEESE: Okay. Thank you.
- MR. HAMPTON: Now, run the clock forward
- ten years, yes there's room. But not in 2007 when
- 14 these are --
- 15 CHAIRPERSON KEESE: Between Mexico and
- 16 the U.S.?
- 17 MR. HAMPTON: Between Mexico and the
- 18 U.S.
- 19 CHAIRPERSON KEESE: Thank you.
- 20 COMMISSIONER BOYD: Commissioner
- 21 Geesman.
- 22 COMMISSIONER GEESMAN: Is there anybody
- 23 signing ten year contracts?
- MR. HAMPTON: No sir.
- 25 COMMISSIONER GEESMAN: That's not going

- 1 to hold you up, is it?
- 2 MR. HAMPTON: I don't think so. That's
- 3 why we are really centered in on obtaining
- 4 liquidity here. As I say, I think there's a
- 5 tradeoff between liquidity and term. And frankly,
- 6 I've been in the gas business a long time, and
- 7 there was a lot of effort to go from long-term, 20
- 8 year, fixed price contracts, to almost a total
- 9 reliant on the spot market, which is, you know,
- 10 the pendulum swings both ways.
- We're clear over the other extreme now,
- 12 but I don't think we'll ever get back to a 20
- 13 year, or even a ten year. I think that's
- 14 dreaming.
- 15 COMMISSIONER GEESMAN: Thank you.
- 16 COMMISSIONER BOYD: Thank you very much.
- 17 I may circle back to Mr. Pak later on to ask more
- 18 questions about Sempra's LNG facility, but not
- 19 now. I promised the staff that they'd get their
- transmission presentation next, so we'll do that.
- Judy, you're making the presentation?
- MS. GRAU: Yes. Okay. As the title
- 23 says, I'm giving a presentation on upgrading
- 24 California's transmission system. And we do have
- 25 a report available, there should be enough copies

- 1 for everybody on the back table.
- 2 I'd like to begin by first mentioning
- 3 that this report was a collaborative effort among
- 4 several members of CEC staff and their
- 5 consultants, including Lynn Alexander, Demy
- 6 Bucaneg, Marianne Causle, Mark Hesters, Linda
- 7 Kelly, Don Kondoleon, Clare Laufenberg Gallardo,
- 8 Jim McCluskey, Bob Strand and myself.
- 9 And we had the good fortune, or the
- 10 misfortune depending on your perspective, of
- 11 publishing this report just 24 hours after the
- 12 east coast blackout. So I think this report is
- probably becoming a little more important and
- 14 being a little more scrutinized than it would have
- 15 been had it happened earlier.
- And I think this underscores one of the
- 17 recommendations in our report, where we mentioned
- 18 that one of the factors that should be considered
- in these proceedings, the update proceedings, is
- incorporating low-probability, high-impact events
- in the analysis, and this is a perfect example of
- 22 that.
- 23 And so, this is a brief rundown on what
- 24 I'd like to cover in this presentation. And if
- 25 you've read the report you'll notice this kind of

1 follows chapter by chapter the outline for the

- 2 white paper.
- 3 Obviously, this report is in support of
- 4 the Electricity and Natural Gas Assessment Report,
- 5 and we are fulfilling the requirements for the
- 6 Integrated Energy Policy Report pursuant to SB
- 7 1389, which requires us to assess California's and
- 8 regional transmission system in terms of its
- 9 availability, reliability, and efficiency.
- 10 And as we began working on the whit
- 11 paper the state Energy Action Plan gave us further
- 12 direction. It says that the state will
- 13 reinvigorate it's planning, permitting, and
- 14 funding processes to ensure that necessary
- improvements and expansions to the bulk
- 16 electricity grid are made on a timely basis.
- 17 And in particular, the plan has language
- 18 that states the following action, "the agencies
- 19 will collaborate in partnership with other state,
- 20 local, and non-governmental agencies with energy
- 21 responsibilities in the California Energy
- 22 Commissions integrated energy planning process, to
- 23 determine the statewide need for particular bulk
- 24 transmission projects."
- 25 "This collaboration will build upon the

1 California independent system operators annual

- 2 transmission plan, and evaluate transmission
- 3 generation and demand side alternatives. It's
- 4 intended to ensure that state objectives are
- 5 evaluated and balanced in determining transmission
- 6 investments that best meet the needs of California
- 7 electricity users."
- 8 And so what we did in our approach to
- 9 this white paper was to identify some of the major
- 10 transmission issues, and we broke them up into
- 11 physical and operation problems, and then in a
- 12 separate chapter planning and permitting problems.
- 13 And then look for potential solutions,
- 14 those that are well underway or not so far
- 15 underway, and look out a little bit further and
- 16 provide recommendations for state actions.
- 17 And so some of the existing transmission
- 18 system problems, physical problems, congestion on
- 19 the major paths. We looked at the major
- 20 intrastate paths, which are Path 15, the congested
- 21 portion of that from Los Banos to Gates, and Path
- 22 26 from Midway to Vincent.
- 23 And then the two major interstate
- 24 transmission paths, Path 45 from Mexico into
- 25 southern California, and Path 46 from Arizona and

- 1 Nevada into southern California.
- We also looked at constraints in load
- 3 centers, with the two largest load liability
- 4 areas, San Francisco Bay Area and San Diego. I
- 5 think Al Alvarado mentioned earlier that a local
- 6 reliability area is characterized by insufficient
- 7 generation to support competitive electricity
- 8 markets within that area, as well as limited
- 9 transmission capacity to import electricity from
- 10 outside the area into the load center.
- And the other thing we wanted to do was
- 12 look at access to renewable resources because,
- pursuant to SB 78 and 1038, which created the
- 14 renewable portfolio standards program, the IOU's
- will be increasing their procurement of renewables
- 16 up to 20 percent -- one percent a year until they
- 17 reach 20 percent. The legislation had a goal of
- 18 2017, but I know the Energy Action Plan has a goal
- of accelerating that to the year 2010.
- 20 And so we looked at four projects that
- 21 we considered to be of immediate concern, and
- 22 immediate concern was defined as projects that
- 23 have either been denied a CPCN, a Certificate of
- 24 Public Convenience and Necessity, or are in the
- 25 CPCN process at the PUC right now, or will likely

- 1 file one in the year 2004.
- 2 And so the four projects we looked at --
- 3 Valley Rainbow, which was denied a CPCN, Devers-
- 4 Palo Verde two, we have indications that Southern
- 5 California Edison may file in 2004, the Jefferson-
- 6 Martin project in the San Francisco area, which is
- 7 currently going through the CPCN process, and then
- 8 Tehachapi, also a Southern California Edison
- 9 proposal for the year 2004.
- 10 And some of the recommendations that
- arose from our analysis I'll discuss later when we
- 12 talk about recommendations.
- And so we've identified some of the
- 14 major planning and permitting problems, as we've
- 15 heard from folks earlier, there are significant
- 16 problems in effective planning and permitting.
- 17 And we've noted these problems over a number of
- 18 years, and they have been brought up in the Little
- 19 Hoover Commission report of 1996 and in other
- 20 venues.
- 21 But basically permitting jurisdictions
- 22 are fragmented and overlapping, environmental
- 23 analyses have been inconsistent in the past, the
- 24 CPCN process does not adequately address regional
- 25 and statewide benefits from projects because of

1 the perspective of looking strictly at ratepayer

- benefits and costs, and methods to implement
- 3 public participation have been well, let's say
- 4 there's room for improvement, they could be
- 5 improved.
- And so some of the state actions to
- 7 address these problems. Obviously, SB 1389 now
- 8 provides for the collaborative identification of
- 9 transmission system expansion needs and requires
- 10 us to make state findings on total benefits and
- 11 costs of projects that can be used by decision-
- 12 makers in the permitting process.
- The Energy Action Plan, as we've noted,
- 14 collaboration between the PUC, the Energy
- 15 Commission, and the Power Authority states that
- 16 the findings of need for transmission projects in
- 17 the IEPR process should be used by the PUC in
- 18 their CPCN process.
- 19 And additionally, we have an agreement,
- 20 the Energy Commission and California ISO are
- 21 working on a Memorandum Of Understanding to
- 22 participate in each other's processes.
- 23 And so our overriding recommendation is
- that we implement a transmission project
- 25 proceeding in the IEPR update process. This would

1 be the 2004 prcoess, this would occur after the

- 2 final report goes to the Legislature on November
- 3 1st.
- And we haven't totally developed the
- 5 entire process, but this is basically what we are
- 6 thinking at this time, that we would hold a pre-
- 7 update workshop with the stakeholders, to solicit
- 8 their input on possible projects that should be
- 9 examined in the 2004 update process.
- 10 Develop and employ assessment methods
- 11 that consider broader strategic benefits as we
- 12 noted, low-probability high-impact events and
- 13 such.
- 14 We'd like to complete the proceeding in
- somewhere from six to ten months, and we're
- 16 drawing upon our experience with generation siting
- cases to come up with process that meets
- 18 everyone's need, and then again provide the
- 19 results to the PUC for use in their CPCN process,
- where the determination of need would be made in
- 21 our process, and they would not need to revisit it
- 22 in their process.
- 23 And so, specifically for the four
- 24 projects that we said were of concern, our
- 25 specific recommendations are that we understand

1 SCE is considering some alternatives to Valley

- 2 Rainbow, and if they are n fact ready to file for
- 3 CPCN approval in the year 2004 we recommend that
- 4 the assessment of project cost and benefits, and
- 5 project need, be conducted in our IEPR update
- 6 process.
- 7 And similarly, for Devers-Palo Verde
- 8 two, if SCE is ready to file, that that assessment
- 9 of cost and benefits and project need be done in
- 10 our venue.
- 11 With respect to Jefferson-Martin, as I
- 12 noted earlier, they are alert going through the
- 13 CPCN process and because that schedule does not
- 14 fit with our schedule we recommend that the CPUC
- 15 keep going through that process and we would not
- do anything here at the Commission.
- 17 And then on Tehachapi, staff also
- 18 recommends that the assessment of project cost and
- 19 benefits and alternatives be conducted in the IEPR
- 20 update process.
- 21 And one other recommendation that came
- 22 out of a collaborative workshop that the Energy
- 23 Commission held with the League of Women Voters on
- June 12th, the consensus view that emerged is that
- 25 it's really essential to include the public in the

1 transmission planing process so there's a clear

- 2 understanding of the facts about the process and
- 3 the project's costs and benefits and impacts and
- 4 alternatives that were investigated.
- 5 And so again in the 2004 update we
- 6 recommend that we identify the most effective
- 7 methods to implement public participation in our
- 8 process and ensure that community impacts
- 9 associated with transmission expansion are
- 10 considered.
- 11 And that concludes my presentation.
- 12 COMMISSIONER BOYD: Thank you, Judy.
- 13 Questions from Commissioners and Advisors?
- 14 CHAIRPERSON KEESE: I have one question.
- 15 You focus on four transmission line projects, and
- 16 I guess that's what we see in a five-year
- 17 timeframe, something like that?
- 18 MS. GRAU: I'm not sure that we actually
- 19 set -- do we have a timeframe cutoff?
- 20 CHAIRPERSON KEESE: Well, I'm just
- 21 wondering how other needs, that are a little
- longer term, let's say all the Palo Verde
- 23 generation, is that all subsumed under Devers? Or
- is it going to be discussed in the discussion of
- 25 Devers?

1 MR. KONDOLEON: This is Don Kondolean, I

- 2 am the Transmission Program Manager here at the
- 3 Commission. When we undertook the idea of
- 4 developing a process that would move forward in
- 5 2004 for the IEPR update we indicated that we
- 6 would only consider those projects of what we
- 7 called immediate concern, and those would be ones
- 8 we had to take action on now.
- 9 Usually the time frame for regulatory
- 10 action leading to the construction and ultimately
- 11 laving the project online could be in the five-
- 12 year window, on the long side maybe the seven-year
- 13 window. So we were looking at projects, again in
- 14 the time frame starting, you know, again having
- 15 projects online within five years of the -- or
- 16 less -- of the date of us taking action in the
- 17 process.
- 18 But to get to the bigger question, which
- is well, what do you do about all of that
- 20 potential stranded generation at Devers, I mean,
- 21 we are trying, again, to coordinate our activities
- 22 with those at the ISO.
- You may be well aware that they are
- 24 doing an extensive investigation through their
- 25 step process, and I think that we need to see the

1 outcome from that process, and what we've built in

- 2 to our so-called coordinated planning activity is
- 3 to have the output from the ISO's long-term
- 4 planning process feed into our IEPR process.
- 5 Of course this time, being that it was
- 6 the initiation of our initial IEPR, we didn't have
- 7 the benefit of actually having that input in this
- 8 cycle. Hopefully by the next cycle we would be
- 9 able to benefit from that.
- 10 So the answer is that we've had to take
- 11 a look at problems, as I said, Commissioner Keese,
- 12 the ones that we felt were of immediate concern
- 13 right now. We've spoken to I think all of the
- 14 Commissioners here and got a consensus that those
- are the ones we could move forward with.
- 16 However, we are leaving the door open,
- 17 as Judy mentioned, to having a pre-update
- 18 workshop, where we would solicit comments from the
- 19 stakeholders with regard to the projects that we
- 20 would be, could potentially be looking at in the
- 21 update process in 2004.
- 22 CHAIRPERSON KEESE: So, one of the
- 23 things -- let me paraphrase here -- one of the
- 24 things that we would want to make clear in this
- 25 IEPR is that we're looking at selected projects,

1 California specific, that we can deal with in a

- 2 short time frame, and that discussions of major
- 3 western transmission grid and the relationship
- 4 with California to that grid is being postponed
- 5 for discussion in subsequent IEPR's?
- 6 MR. KONDOLEON: Well, again, I look at
- 7 the Devers-Palo Verde two project, and that's one
- 8 that has regional ramifications, and it is
- 9 included as potential projects for us to consider
- 10 in the IEPR.
- 11 So, again, if you look at the
- 12 projections certainly, at least in the short term,
- adding capacity to the Path 46, through the
- 14 addition of Devers-Palo Verde two, would satisfy
- 15 requirements out a certain number of years.
- Is is four years, five years, six years,
- seven years, I can't tell you right now, but
- 18 certainly it helps to address some of the problems
- 19 that could exist in the absence of such a project.
- 20 CHAIRPERSON KEESE: Characterize what
- 21 we're doing to deal with a robust western grid.
- 22 Are we leaving that to other bodies to handle?
- 23 And we're just not going to comment. Or is it
- incorporated in our discussions?
- 25 MR. KONDOLEON: Well, I think I would

- 1 say that we're interested in pursuing such a
- 2 thing. Are we doing it independent? No. I think
- 3 we need to continue with what we have been doing,
- 4 which is participation through the SSG-WI group,
- 5 through work that we had originally worked on back
- 6 in 2001 with the Western Governor's Association.
- 7 I think, on the regional side, that's
- 8 where the work's going to be done. I doubt
- 9 seriously it's going to be done right here at the
- 10 Commission. With regard to those decisions we
- 11 have to do it in coordination with the other
- 12 regional entities.
- I think, again, what staff was looking
- 14 at was those projects, including inter-state
- 15 projects, they felt had a potential impact on
- 16 California in what we consider to be the near
- 17 term, not the long term.
- 18 And again, I think we would, in the next
- 19 IEPR, rely heavily on the work that would be done
- 20 through the ISO long-term planning process, as an
- 21 input to our process at looking at what sort of
- 22 fixes we believe are necessary, again with regard
- 23 to California's interconnection to the western
- 24 grid.
- 25 CHAIRPERSON KEESE: Okay, let me try it

one more -- in this one we're going to deal with

- 2 specific issues, and if the IEPR Committee is
- 3 making a recommendation, it would be that the
- 4 broad issue of the robustness of the western grid
- 5 is continuing in other forums. And California
- 6 should continue to participate in those forums?
- 7 MR. KONDOLEON: Absolutely. And as you
- 8 know, this Commission is actively participating in
- 9 a number of those forums, and I think we would
- 10 recommend that we continue to do that. I think
- 11 the key is us coordinating our analytic timeline
- 12 with the timeline of other entities.
- I mean, the results of these analyses,
- 14 these studies, are always dependent upon the
- 15 assumptions that go in. It would be nice to be
- 16 able to dovetail the assumptions that we come up
- 17 with here with regard to demand assumptions, fuel
- 18 price assumptions, generation and retirement
- 19 assumptions, those are all -- and how about
- 20 renewable development assumptions -- I mean these
- 21 are all key drivers in any sort of regional
- analysis that'll be done, if by us or by someone
- 23 outside of California, and I think the key is that
- 24 we link the most credible assumptions that we
- 25 have, which is what we've just developed in this

1 IEPR process, and try to move it forward to those

- 2 forums that are continuing those assessments.
- 3 So that's what we're trying to do or
- 4 look at in the next IEPR, is to coordinate our
- 5 development of assumptions, bring those to the ISO
- 6 so they can be utilized in their long-term
- 7 planning process, and hopefully we all benefit
- 8 from using consistent assumptions.
- 9 And as Judy mentioned earlier, we need
- 10 to work on the development of a common analytical
- 11 method that people are able to accept as being
- 12 able to provide what the true value of
- transmission projects are, given the high range of
- 14 uncertainties in a lot of these areas.
- 15 CHAIRPERSON KEESE: Thank you. I just
- 16 think it's going to be important that we reference
- 17 this in our document. We're going to focus on the
- 18 specific project, but I think we have to reference
- 19 the overall context, too.
- MR. KONDOLEON: Absolutely.
- 21 COMMISSIONER BOYD: Okay, thank you
- 22 staff. No further questions up here, we'll turn
- 23 to the audience again. I have Joe Kloberdanz of
- 24 San Diego Gas and Electric. And Joe, you correct
- 25 your name if I clobbered it here.

1 MR. KLOBERDANZ: That wasn't bad. I was

- ten before I could pronounce it. Joe Kloberdanz,
- 3 and I'm the manager responsible for electric case
- 4 management for the Sempra Energy utilities, the
- 5 not as interesting side of the Sempra Energy
- 6 companies. Three points on electric transmission,
- 7 and one request. And I should be able to do this
- 8 fairly quickly.
- 9 I was pleased to note in the Electricity
- 10 and Natural Gas Assessment Report that the intent
- is described here to arrive at a situation where
- 12 we find need for a transmission line once. And I
- 13 would ask that whatever we do -- first let me say
- 14 that the notion of collaboration, consensus-
- 15 building, who can argue with that.
- But let me just ask that, whatever you
- do with this report on this issue, that you arrive
- 18 at a recommendation to the Legislature that has us
- 19 finding need once, and does that in about 12
- 20 months or less. You have in your draft some
- 21 recommendations that seem well-intentioned in that
- very direction, and I want to encourage that. One
- 23 time for need. About 12 months is what it should
- 24 take.
- 25 A third point. Some agency, presumably

```
1 still the Public Utilities Commission, will be
```

- 2 responsible for the environmental review of these
- 3 projects. And I would encourage the collaborating
- 4 agencies to do whatever they can with respect to
- 5 the environmental branch, the environmental staff
- 6 at the Public Utilities Commission.
- 7 Those poor folks work hard, they're
- 8 well-intentioned, they're under-staffed as much as
- 9 I can imagine. And they have to deal with some
- 10 kind of Byzantine process to contract with the
- 11 consultants they need to get the environmental
- documents they need to have developed.
- There's probably good reasons why that
- 14 process is difficult, but we need to address that
- 15 to. These folks need to be able to get the work
- done that we're asking them to do. And I will not
- 17 beat up on them, these folks work hard. And
- 18 they're well-intentioned. But there's just not
- 19 enough of them.
- 20 And I realize I'm talking at a time that
- 21 the state budget's got problems. But if we're
- going to make these things happen we need to
- 23 allocate resources to deal with that.
- Those are my three points. The request
- is a minor thing, but it comes from a PTO, a Proud

1 Transmission Owner, and we would just ask that on

- 2 pages 27 and 38 of the report that was just
- described for us, that there's a reference to
- 4 SDG&E having outages occurred frequently in 2000
- 5 and 2001.
- 6 That's true. I was in our emergency
- 7 operation center when those outages occurred. I
- 8 would just ask that somehow it be noted that those
- 9 outages occurred frequently because they were
- 10 directed by the ISO as a result of statewide
- 11 rolling blackouts.
- 12 Thank you very much.
- 13 COMMISSIONER BOYD: Thank you. Any
- 14 questions, comments? Commissioner Geesman.
- 15 COMMISSIONER GEESMAN: I guess I would
- 16 encourage you to maintain an open mind abut where
- any jurisdictional issues ultimately should be
- 18 resolved. And I would strongly encourage you and
- 19 your colleagues at the other PTO's to take a blank
- 20 piece of paper and attempt to design a system that
- 21 would work the way you'd like to see it work.
- Don't have any presumptions going into
- 23 it as to any particular virtues in the status quo
- 24 configuration. I'm not certain there are very
- 25 many virtues in the status quo. But you have an

1 opportunity now, I suspect as never before, to put

- 2 your thoughts on that blank piece of paper.
- 3 And I can assure you we will be doing
- 4 that as well. But I wouldn't carry forward any
- 5 fixed notion of how things have to be because
- 6 that's the way they have been. We haven't done a
- 7 good enough job in providing for these facilities
- 8 for the status quo to have any presumption of
- 9 longevity at all.
- 10 MR. KLOBERDANZ: Appreciate the advice.
- 11 CHAIRPERSON KEESE: Let me mention one
- 12 thing also. In either late December last year or
- 13 early January this year, at a broad conference --
- 14 CFEE conference I believe -- dealt with
- 15 specifically the issue of transmission -- the
- 16 suggestion was made by a third party, not one of
- 17 the administrators and not one of the utilities --
- 18 that the appropriate way to handle transmission
- 19 siting was that for the ISO to decide need, for
- 20 the Energy Commission to decide appropriateness,
- 21 and for the PUC to decide who paid for it.
- There was generally, you know, that's a
- 23 real thumbnail sketch, but there was broad support
- 24 across the board for moving towards something like
- 25 that. Commissioner Geesman is very actively

1 involved in how we get there, and I think there's

- 2 an acknowledgment that if the PUC system can't
- 3 handle that, then we either need to change the PUC
- 4 system or change the way we do it.
- 5 I think there's a recognition in all the
- 6 three entities involved in the Action Plan that
- 7 this is a very high priority, and, as John
- 8 suggested, working off a clean sheet of paper and
- 9 deciding what the best way to do it would be would
- 10 be helpful as we work towards a solution.
- 11 MR. KLOBERDANZ: Thank you. I just
- wanted to add that I am encouraged that there is
- dialogue going on at the agencies at this point.
- 14 And keep up the good work.
- 15 COMMISSIONER BOYD: Thank you. Mr.
- 16 Barry Flynn?
- 17 MR. FLYNN: Yes, sir, Commissioner Boyd
- 18 and fellow Commissioners. My name is Barry Flynn,
- 19 I'm a consultant, in principle with the consulting
- 20 firm of Flynn RCI. I'm here today on behalf of a
- 21 group of municipalities that are my clients. They
- 22 have specific interest in transmission issues, and
- 23 those are the issues I've been working on in their
- 24 behalf.
- The focus of my comments will be on

1 transmission planning. And let me just back up

- 2 and say that the municipalities are the city of
- 3 Alameda, the city of Palo Alto, the city of Santa
- 4 Clara, and San Francisco.
- 5 First of all, I'd like to say that I
- 6 haven't taken the time to consume all the material
- 7 that's been put out on this subject by the staff.
- 8 That which I have read and digested I find it was
- 9 very well done, and I would just want to encourage
- 10 you and your staff in your pursuit in the area of
- improving the transmission planning process in
- 12 California.
- I don't really have any major problems
- 14 with the conclusions just addressed that the staff
- 15 has come up with. It's sort of like one of those
- 16 things when I read it I say "yeah, let's do it."
- 17 How are you going to do it, you know?
- 18 When you disagree you want to debate the
- issue, when you agree you want to know how you're
- 20 going to do this. That's really where some of my
- 21 comments will go today, not taking issue with it.
- I would rather be talking about it
- 23 after I learn more about what they have in mind,
- 24 but I thought I might start out the process this
- 25 afternoon.

Before I hit a couple of specific areas,

- 2 just to try to stay at the policy level just a
- 3 little bit. I do agree with many of the statements
- 4 made today, we do need some regulatory stability
- 5 and greater cooperation between the California
- 6 Energy Commission, the CPUC and the ISO in
- 7 transmission planning. I haven't heard anybody
- 8 disagree with that.
- 9 I also think we need a more transparent
- 10 process. We need to balance the need to keep
- 11 certain market information confidential with the
- 12 need to provide transparency so that everyone can
- 13 analyze the infrastructure needs and analyze the
- 14 benefits to reducing the constraints that that
- 15 transmission infrastructure now presents to the
- 16 efficient flow of electricity throughout the state
- 17 of California.
- Those aren't new, they're just sort of
- 19 embellishment of what the staff has already said.
- 20 But to be more specific as to what the CEC might
- 21 be able to contribute, I have a couple of ideas
- for your consideration. They're not original, but
- 23 hopefully they can add to how we can get more
- 24 specific about how the CEC can contribute to this
- 25 planning process on a cooperative basis.

```
1 I believe the greatest area of
```

- 2 contribution can be in the cost versus benefits
- 3 side of the transmission justification issue.
- 4 Under the ISO and the PTO's planning process the
- 5 reliability part of the equation has gotten a lot
- 6 of attention, and there could be improvements
- 7 there I believe, but I believe the biggest
- 8 contribution that the CEC staff and the Commission
- 9 can do is really addressing that benefit side.
- 10 I got a flavor of talking about
- 11 strategic benefits from the report that's been
- 12 produced, by I don't have a real feel about how
- 13 they're going to do it. But I do feel that, based
- on my knowledge of how competent the staff is,
- 15 that they could make a major contribution in that
- 16 area. And I'm just saying there's a dramatic
- 17 need.
- To put this in perspective, every year
- 19 there is a plan that the PTO's develop that the
- 20 ISO reviews that talk about what the reliability
- 21 needs are. There's been a lot of discussion
- 22 recently with regard to looking at the economic
- 23 benefits and justification for transmission.
- 24 And the ISO has calculated, as part of
- 25 the Path 15 proceeding, what it considered the

1 beneficial impact, from an economic standpoint, on

- 2 the ratepayers of California. And they're also
- 3 doing that now in the southwest as part of the
- 4 step process that Mr. Kondolean referred to.
- 5 But there's not a systematic process to
- 6 do that throughout the ISO control grid, and
- 7 that's what should be done and that's where the
- 8 CEC, I think, can make a major contribution.
- 9 Jumping back to the grid, I mean the
- 10 reliability side of the equation, even though
- 11 there's been a much more defined and comprehensive
- 12 process going on in the reliability, basically the
- way you impact the amount of transmission that
- 14 gets built for reliability needs is you basically
- 15 change some assumptions with regard to the what
- 16 the load is that you're trying to serve, or you
- 17 change the assumptions in terms of the performance
- 18 that the transmission and generation system have
- 19 to meet without dropping load.
- 20 So one of the major areas of
- 21 uncertainty, or risk, is identifying what those
- 22 performance criteria are. I think that's
- 23 currently the responsibility, and should probably
- 24 maintain the responsibility, the ISO board of
- 25 directors.

1 But I believe there are a lot of issues

- 2 with regard to providing input to those criteria
- 3 that would be helpful, and that the CEC staff
- 4 could make a contribution to.
- I am aware that in the past they've
- 6 developed a model called the supply assessment
- 7 model, that they've applied in a couple of
- 8 instances to studying local reliability needs. I
- 9 believe that's a specific area where the CEC can
- 10 make a contribution.
- In summary, we don't take any issue with
- 12 regard to the recommendations so far in this area.
- 13 We want just to focus more on how we go abut
- 14 accomplishing the goals that have been laid out.
- 15 And specifically, as I think a number of
- 16 people have said, we applaud the Commission to try
- 17 and work together with the other Commissions in
- 18 the state of California in terms of improving that
- 19 process.
- Thank you for your time.
- 21 COMMISSIONER BOYD: Thank you very much.
- 22 Any questions? Comments? Thank you very much for
- 23 your testimony. Mr. Guliasi, I had noted you
- 24 earlier in the day had said transmission, so I
- 25 reshuffled your card in here.

```
1 MR. GULIASI: Thank you very much.
```

- 2 Please let me commend the staff on this particular
- 3 report. I think that their approach to the issues
- 4 they raised and the recommendations they put
- 5 forward make this report perhaps the best in class
- 6 among a very fine set of reports.
- 7 And notwithstanding Chairman Keese's
- 8 recommendations to focus greater attention to the
- 9 relationship of these projects to the western
- 10 grid, I still think this report stands out among
- 11 the others.
- 12 I'm also encouraged by Commissioner
- 13 Geesman's remarks in his recommendation to
- 14 basically start with a blank sheet of paper and
- not be bound by the status quo in the transmission
- 16 siting and planning processes, and I might add to
- 17 that also the cost recovery and cost
- 18 responsibility processes that preside at the PUC.
- 19 Let me be blunt. Let's face it, I think
- 20 the transmission planning and siting process, and
- 21 the cost recovery cost responsibility process at
- 22 the PUC, including all the environmental reviews
- 23 and the process that goes through the ISO, is one
- of the things that needs to be fixed the most.
- 25 And I think that maybe that's one of the

1 things you can draw attention to in your final

- 2 report to the Governor.
- While the staff limited itself to
- 4 consideration of four specific projects that fit
- 5 into their timeframe, I think all you have to do
- 6 is look at the transmission cases that have been
- 7 before the PUC over the last couple of years, in
- 8 addition to the Jefferson-Martin project, as they
- 9 pointed out, is in front of the PUC at the moment.
- 10 We've had some experience over the last
- 11 couple of years with some other very large-scale
- 12 transmission projects. And in every instance
- 13 there have been problems that have surfaced in the
- 14 transmission project at the PUC. I think of the
- 15 Tri-Valley project, I think of the northeast San
- 16 Jose project.
- 17 The PUC -- again, I want to be kind to
- 18 them, just as Mr. Kloberdanz was -- a lot of work,
- 19 not enough staff, perhaps not enough resources.
- 20 But the fact of the matter is, if you look at the
- 21 record, the PUC has not managed to stay on
- schedule with one of these transmission projects.
- 23 This is what I referred to earlier this
- 24 morning. You can't do serious, effective planning
- 25 just in time. These are projects that need a long

1 time horizon for planning and implementation. I

- 2 understand that this Commission, and certainly the
- 3 PUC, have to be mindful of the need for public
- 4 participation, and oftentimes public participating
- 5 means a slowdown in the process.
- But we have some other models to look at
- 7 and think about when we take out that blank sheet
- 8 of paper and sharpen the pencil. This Commission
- 9 has demonstrated that it is possible to plan and
- 10 site facilities on time, on schedule.
- Now perhaps what you did in the last
- 12 couple of years was the product of a crisis, and I
- think it remains to be seen if, in a non-crisis
- 14 setting, we can stick to time frames and actually
- 15 get work done.
- 16 But this Commission has demonstrated,
- 17 and has a track record now, of showing this state
- 18 that planning can be done and siting can be done
- in a reasonable time frame, and you can get
- 20 results. So I think when we take out that blank
- 21 piece of paper we want to look at this Commission
- 22 as a model, and think hard about what we might
- 23 want to do.
- 24 And again, I'm mindful of the statutory
- 25 and cultural and institutional constraints that

1 each agency is under. But I think we do have to

- 2 start by suspending our believe about the status
- 3 quo, and reshape, re-tool, re-engineer, whatever
- 4 word you like, the transmission planning and cost
- 5 recovery process.
- I think that concludes my remarks. If
- 7 there are any questions I 'd be happy to entertain
- 8 them.
- 9 COMMISSIONER BOYD: Thank you.
- 10 Commissioner Geesman?
- 11 COMMISSIONER GEESMAN: A question on
- 12 cost recovery, Les. The projects you mentioned
- are also subject to a FERC tariff, aren't they?
- MR. GULIASI: Yes.
- 15 COMMISSIONER GEESMAN: So hypothetically
- 16 they recover their costs through the ISO grid
- 17 management charge?
- 18 MR. GULIASI: That is correct, subject
- 19 to FERC tariffs and so forth.
- 20 COMMISSIONER GEESMAN: Effectively, the
- 21 economic regulation of these projects was
- 22 federalized quite some time ago?
- MR. GULIASI: Yes, it has been.
- 24 Unfortunately, what comes out of the PUC, in
- 25 addition to a certificate, a CPCN, we've had

- 1 unresolved cost recovery issues, where the
- 2 Commission has, for example, imposed cost caps.
- 3 And has threatened to intervene in the
- 4 FERC proceeding, essentially I suppose arguing
- 5 that the FERC should not entitle the utility to
- 6 recover all the prudent costs associated with
- 7 building a transmission project.
- 8 And when I say commission, let me
- 9 clarify. I mean the California Public Utilities
- 10 Commission, not this Commission.
- 11 COMMISSIONER GEESMAN: Thank you.
- 12 COMMISSIONER BOYD: Questions? Thank
- you very much. I have Mo Beshir of LADWP?
- MR. BESHIR: Good afternoon,
- 15 Commissioners. I don't really have too many
- things to say, except for one I would like to
- 17 commend the CEC staff for producing a superb
- 18 document. I think it's really -- I know it's a
- 19 lot of work.
- 20 In the Los Angeles Department of Water
- 21 and Power we have been engaged in integrated
- 22 resource planning process for many years, and I do
- 23 know what purpose that serves. It's been serving
- 24 us very well, and I hope will be used in the right
- 25 way.

1 One comment I have is with the resource

- 2 adequacy issue. I think I have talked about this
- 3 before also. The municipal utility, especially
- 4 like the Los Angeles Department of Water and
- 5 Power, we do have resource adequacy requirements
- 6 that come from our obligations to serve our
- 7 residents and customers.
- 8 So we have that requirement. We do
- 9 include it in our integrated resource planning,
- and I don't think that is a big issue for us.
- But I do understand, reading through the
- 12 reports and from the process, that kind of
- 13 requirement is really needed for the IOU's and
- somebody has to be looking at the adequacy
- 15 requirement issues, because that's really required
- 16 to be able to serve your customers on a long-term
- 17 basis. Thank you very much.
- 18 CHAIRPERSON KEESE: May I ask one
- 19 question? Let's be more generic and talk about a
- 20 broader set of municipalities. Basically you're
- 21 saying that L.A. is fine, you have a resource
- 22 adequacy standard that you meet, so you don't lean
- on the system?
- MR. BESHIR: Correct.
- 25 CHAIRPERSON KEESE: Are there maybe

1 other municipals that may be leaning on the

- 2 system?
- MR. BESHIR: I'm not aware of any.
- 4 MR. BAKKER: Aren't you your own control
- 5 area?
- 6 MR. BESHIR: We are our own control
- 7 area. And I think IID is also their own control
- 8 area. So we do have WSCC and their requirements,
- 9 we do have to meet those on an ongoing basis.
- 10 And we do plan to meet all the planning
- 11 standards, as well as the operating standards in
- 12 the MORC, which is the Minimum Operating
- 13 Reliability Criteria, under WSCC, so we do meet
- 14 all those requirements and that's how we operate
- 15 and plan our system.
- 16 And our integrated resource planning
- 17 process, we do recognize our need and obligation
- 18 to serve. So we do make appropriate assumptions
- in our forecast, appropriate assumptions in our
- 20 reserve margins, and appropriate assumptions
- 21 wherever we can find in our resources.
- 22 CHAIRPERSON KEESE: I guess, my question
- 23 deals with, when we deal with the issue of
- 24 resource adequacy, it seems to me if we restrict
- 25 ourselves to delaying with resource adequacy in

1 the ISO area, we haven't handled what we're being

- 2 requested to do for the state of California.
- 3 That we really have to decide, we have
- 4 to look at a resource adequacy program for the
- 5 whole state. Now that may mean that, with respect
- 6 to LADWP territory, that we say they're more than
- 7 adequate, and that's entered into the equation,
- 8 but it seems to me we can't write the equation
- 9 without involving an analysis of the munis, the
- 10 irrigation districts, the rural co-ops.
- We're going to have to somehow or other
- wrap them in, aren't we?
- MR. BESHIR: In general, you're right I
- 14 guess. From resource adequacy and general
- 15 reliability consideration is really a regional
- issue, it's not really a California issue per se,
- 17 it would be really a western interconnected system
- 18 issue.
- 19 So we look at it from that perspective,
- 20 and we try to meet all the WSCC requirements and
- 21 MORC requirements as it comes. So that's how we
- look at it ourselves, we don't live on an island
- 23 from reliability consideration.
- I do see, from that perspective you
- 25 could probably see the reliability of adequacy

1 issues in LADWP and other municipalities from that

- 2 perspective, but there would not be a requirement
- 3 from CEC I would suspect or somebody, as
- 4 regulations required for say, LADWP to meet any
- 5 additional adequacy requirements.
- 6 Because we already have adequacy
- 7 requirement rules and regulations internal from
- 8 our process, from our obligation to serve.
- 9 CHAIRPERSON KEESE: That's not where I
- 10 was going. You know, as the Energy Commission, we
- 11 sit up here many times and we realize we have no
- 12 carrots and we have no sticks. So our regulatory
- authority is reasonably limited to the things the
- 14 Legislature tells us to do.
- But what they've asked us to do is give
- 16 them an analysis here. And it seems to me the
- 17 analysis cannot just set aside the muni's and say
- 18 "they're doing fine, so we'll look at the rest of
- 19 it." We have to -- and I sort of gathered from
- 20 your testimony, by saying we're doing fine you
- 21 don't have to deal with us.
- I think we have to incorporate you in
- 23 that. And if you have a surplus of 20 percent
- like you perhaps had, and helped out in the
- 25 crisis, because you had excess, that should be

1 part of the equation. We're going to talk about

- 2 resources in the northwest that California needs
- 3 and resources in the southwest that California
- 4 needs. Don't we have to incorporate 100 percent
- of the resources in California in this analysis?
- 6 MR. BESHIR: Yes. In fact we do have, as
- 7 I say, this is really a regional issue, and that's
- 8 how we would look at it. I would not, if a study
- 9 would be done I guess to look at adequacy I would
- 10 not, it would just be looking at California in an
- 11 island situation.
- 12 It would be really an original issue.
- 13 It would be LADPW, as well as everybody else,
- 14 would be figured into that process. Well, part of
- 15 the various support documents which were produced
- 16 for this process deals with the adequacy issue as
- it relates to municipalities.
- I think that's really an excellent
- discussion in that paper, how the municipalities
- 20 have been able and been meeting their obligation,
- 21 their portion of the equation, in a sense, from a
- 22 reliability consideration. And we will continue
- 23 to do that. And especially in the LADWP, being a
- 24 control area, we do have the incentives, as well
- 25 as the capabilities, to do those kind of things.

```
1 CHAIRPERSON KEESE: Thank you.
```

- 2 COMMISSIONER BOYD: Thank you. Mr.
- 3 Kelly from Independent Energy Producers also asked
- 4 to speak on this subject of transmission. Steven?
- 5 MR. KELLY: Thank you, Commissioner. I
- 6 just wanted to follow up on some comments I've
- 7 heard during the last 45 minutes of discussion,
- 8 kind of feeding off Commissioner Geesman's comment
- 9 about we'll have an open slate for this.
- 10 The process that I hear described
- 11 earlier was one in which transmission planning
- 12 would start at the ISO for reliability. And my
- 13 presumption is that's going to take a year or so
- 14 to get through that process, typically that seems
- 15 to be what it's taking.
- And then it would come over here for the
- 17 IEPR process, which is going to take a year or so
- 18 probably. And then would go to the PUC for CPCN,
- 19 which will take a year or so. When I add the
- 20 years up, I get at least five, possibly six years,
- 21 just for the planning of a transmission line. And
- I just can't believe that is a good pattern or
- 23 model that we should use.
- 24 I really think, in the vein of starting
- 25 with an open slate here, we really need to look at

- 1 a way to make this more definitive and in a
- 2 shorter time frame. And I feed off the San Diego
- 3 comments. The importance is to have a decision
- 4 that is pretty stable and final.
- 5 And it can't be one that takes five or
- 6 six years to decide to go forward with
- 7 construction, which is going to take another --
- 8 depending on the size of the project -- multiple
- 9 years. We need to bring that down into a context
- 10 that works better.
- 11 And I just urge you to think that
- 12 through. Multiple venues provide multiple
- opportunities for everybody to change the project,
- 14 so that anybody's previous analysis is irrelevant
- 15 then, and that won't work.
- So I just want to urge you in your
- 17 recommendations and study on this, is we need to
- 18 think of a way to bring this in and make it more
- 19 helpful to folks. Because the marketplace has to
- 20 respond to final decisions, otherwise it's chaotic
- 21 again. So that's my comment.
- 22 COMMISSIONER BOYD: So your clean sheet
- of paper is not five years old?
- MR. KELLY: No. And I mentioned in my
- 25 comments this morning that I thought that one

- 1 agency doing siting is perhaps the model that
- 2 might be more effective. And based on what I've
- 3 heard I continue to think that, because I think
- 4 one agency can get a decision out the door in a
- 5 year or so.
- And that may require legislation, that's
- 7 something we have to think about and work through.
- 8 But dispersing it across multiple entities, each
- 9 doing its own little piece, I think will be the
- 10 path to failure.
- 11 COMMISSIONER BOYD: Do you have any
- 12 comments or questions? Thank you, Steve. Now I'm
- going to circle back to our two remaining
- 14 speakers, who had some issues off of transmission
- and some of the things we talked about earlier.
- 16 First, gas issues. Eric Eisenman of PG&E gas
- 17 transportation systems.
- MR. EISENMAN: Good afternoon,
- 19 Commissioners. I'm representing PG&E gas
- 20 transmission northwest and north Baja pipeline.
- 21 The former is the pipeline that runs from Canada
- 22 to California, and the latter, north Baja, runs
- 23 from the end of the El Paso system at Ehrenberg,
- 24 and serves generation in Mexico.
- 25 And now we are involved in the LNG

1 discussion, as Mr. Hampton described, to switch

- 2 around that north Baja system and for it to become
- 3 a west to east pipeline.
- 4 I appeared two months ago at a hearing
- 5 dealing with the staff's draft natural gas market
- 6 assessment. I filed testimony then and made some
- 7 comments. In the staff's natural gas market
- 8 assessment that was issued recently, the final
- 9 document, many of the same questions are there,
- 10 and I would refer you back to that testimony.
- I won't repeat it today, but I think what I said
- 12 then still goes.
- One thing I see in the main report was
- 14 the statement that there is declining output from
- several gas producing basins in the lower 48
- 16 states. That's a long-term concern of this
- 17 Commission, and very well should be. And it's not
- just of this Commission, but it's of everyone.
- 19 But the market is responding, and that's
- 20 what we're seeing with the LNG development. And I
- 21 would agree very much with Mr. Pak' statement this
- 22 morning that your report to the Legislature should
- 23 emphasize a scenario that has LNG on the west
- 24 coast by 2007.
- To me it's not an if anymore, it's a

- when, and the when is probably around 2007.
- 2 Whether you call it a base case or a supplemental
- 3 base case or whatever, we really think it is going
- 4 to happen.
- I want to pass out a table here. I'm
- 6 not here representing any of the potential LNG
- 7 projects, rather kind of the pipeline that can
- 8 move gas for all of them. And I think I have
- 9 enough copies for everyone in the room.
- 10 And what I've done here is list all the
- 11 proposed projects, including the two we've heard
- 12 from earlier, and just some general factoids about
- 13 them, as far as their capacity and project
- 14 features, and their permitting status. And the
- 15 permitting status is ongoing, there's been a lot
- of progress made.
- 17 It's a little complicated with the
- 18 Mexican agencies. And I do believe this is up to
- 19 date, we've made our best efforts here to have all
- 20 our information correct. I would note that
- 21 Chevron is not here today, at least to my
- 22 knowledge they're not here. That particular
- 23 facility would be offshore, and then with a
- 24 pipeline moving it onshore.
- I won't go through all the detail here,

1 I think it's all self-explanatory. And we will

- 2 keep the staff in the loop as the data here
- 3 changes over the coming months.
- 4 We do have an ongoing open season.
- 5 We've changed the dates a few times as far as when
- 6 bids are due and requests for service. We've been
- 7 working with CRE, the Mexican regulatory agency
- 8 that has jurisdiction over the Mexican piece of
- 9 pipe that's owned by Sempra. We own the U.S.
- 10 piece of pipe.
- But we are managing the open seas on
- 12 behalf of both companies. So as of right now the
- 13 requests for service are due on September 15th.
- 14 We think that it's not going to change again.
- 15 When I was here a couple of months ago I gave you
- 16 a date in July when those requests were due.
- We've had to move that.
- We'll then kind of go through an
- 19 engineering process to look at exactly what we
- 20 have to do, and by next January with the potential
- 21 developers get to binding, firm transportation
- 22 precedent agreements. On north Baja we'll
- eventually need to go to FERC. The Baja Norte,
- 24 the Sempra entity, will need to go to the Mexican
- 25 regulator, but we think it's very realistic that

- 1 gas will be flowing by 2007.
- 2 With respect to the FERC certification
- 3 process, whether it's for north Baja or the
- 4 pipeline for Canada, it is a certification process
- 5 that has worked and is working. Not just under
- 6 the Pat Wood regime, but even going back the last
- 7 ten years.
- 8 It's a very detailed process, but you
- 9 don't hear the whining about certificating a gas
- 10 transmission line like you do an electric
- 11 transmission line, and as you look at what the
- 12 best way is for licensing electric transmission
- 13 I'd really urge you to take a look at how FERC has
- 14 done it for gas pipes.
- There are some differences of course,
- 16 the physics and engineering are different. But
- 17 there are a lot of similarities. Our system has
- 18 expanded several times. From Canada to north Baja
- 19 certification over the last couple of years. It
- 20 had some hiccups, but it went pretty smoothly.
- 21 Kern River has had a number of increments, and
- 22 it's worked. And I really urge you to take a look
- 23 at that.
- 24 There are some statements in the report
- 25 from staff concerning demand for gas in the

1 southwest and how is that affecting California,

- 2 and gas being taken off the El Paso system. LNG
- 3 will meet some of that demand, I think we heard
- 4 that earlier from Mr. Hampton.
- 5 Discussions are ongoing with markets,
- 6 generators, the utilities, in Arizona and in
- 7 Nevada. So I think some of that concern that we
- 8 see in the report will be alleviated once LNG
- 9 supplies are flowing.
- 10 I would also note the Arizona
- 11 Corporation Commission has an inquiry going on
- 12 natural gas infrastructure, and of course they're
- 13 very concerned that California is stealing their
- 14 gas off the El Paso system.
- And there's been a big battle between
- 16 the two states that many of us have tried to stay
- out of, but it's something you should monitor as
- 18 to what a neighboring state is doing. They are
- 19 having a hearing on September 10th to look at all
- 20 infrastructure -- pipeline, storage and so on. So
- 21 it's very analogous to the gas piece that you're
- 22 doing in this process.
- This morning we heard some comments
- 24 about commitments needed to build generation.
- 25 Well, there's no such thing as a merchant

```
1 pipeline. I mean, I don't think there ever has
```

- 2 been or there ever will be. Pipelines don't build
- 3 without contract commitments themselves.
- 4 How long do they have to be? Well, it
- 5 kind of depends, you know. The bigger it is, the
- 6 longer it has to be. I would agree with Mr.
- 7 Hampton that the more liquidity there is the more
- 8 comfortable we're going to be just generally
- 9 speaking.
- 10 Back when the pipeline from Canada went
- 11 through a major expansion ten years ago, most of
- 12 the contracts were for 30 years. Southern
- 13 California Edison signed one, there's others in
- 14 this room that signed one. Those have 20 years
- and three months to go. That's a long, long time.
- We don't have any fantasy about getting
- 17 contracts of that length again, but certainly the
- 18 ten years that we've heard for generation is a
- 19 nice round number. If it's a smaller project, it
- 20 could probably be quite a few years less. If it's
- 21 a big huge project it's something we would have to
- look at. It would probably have to be at least ten
- 23 and maybe a little bit linger.
- 24 And certainly if you look at generators
- 25 who might be signing up on pipelines, we're going

```
1 to look behind them. And if we see they have
```

- 2 market commitments for ten years that's going to
- 3 get our managers, our lenders, a lot more comfort.
- 4 So I would urge you to be mindful that,
- 5 when you're talking about contract commitments for
- 6 energy infrastructure that generation is not
- 7 unique. It fits with interstate pipelines as
- 8 well.
- 9 I would also, without too much further
- 10 comment, say that the access into the SoCal Gas
- 11 and the San Diego Gas and Electric systems is
- going to be important, as the LNG developers move
- 13 forward.
- 14 And that concludes my comments for
- 15 today.
- 16 COMMISSIONER BOYD: Thank you.
- 17 Questions? Chairman Keese.
- 18 CHAIRPERSON KEESE: A quick question.
- 19 Remind me what the current capacity of Baja is?
- 20 MR. EISENMAN: it's about 500 as I
- 21 remember.
- 22 CHAIRPERSON KEESE: And in your open
- 23 season, are you talking about a capacity moving
- 24 east?
- MR. EISENMAN: Yes. If we believe it's

1 something greater than 500 then it's pretty easy

- 2 expansions of it. Most of that work would
- 3 probably be done in Mexico, so it would be on the
- 4 Baja Norte system, owned by Sempra.
- 5 CHAIRPERSON KEESE: But that, I guess --
- 6 let me ask. If there were two terminals built in
- 7 Baja at two billion a day, are you going to handle
- 8 that through North Baja?
- 9 MR. EISENMAN: If they are commitments,
- 10 yes. It can be done. We've got the right-of-
- 11 ways. I certainly don't see anything like two
- 12 BCF. I don't think that's a reasonable --
- 13 CHAIRPERSON KEESE: So most likely part
- 14 of it would float that way, and part of it would
- 15 go into San Diego.
- MR. EISENMAN: Correct.
- 17 CHAIRPERSON KEESE: Or stay in Mexico,
- and be used for generation in Mexico?
- 19 MR. EISENMAN: Right. In the Rosarito
- 20 area, and also in the Mexicali area, Sempra has
- 21 the plant that's now operating, as does Energen
- 22 have a plant that's operating. And that gas is
- 23 now being served by North Baja, off El Paso. That
- 24 would also switch around.
- 25 CHAIRPERSON KEESE: Thank you. Any

1 other questions or comments? A comment I'd like

- 2 to make less too many people in the audience think
- 3 we sit here in splendid isolation.
- 4 We have actually been following gas
- 5 pretty closely, for the pst couple of years. Even
- 6 before I came to the Commission we were carefully
- 7 following the gas situation in California and the
- 8 United States. And actually have had very
- 9 pleasant discussions with Pat Woods and the staff
- of this Commission, and the staff of FERC actually
- 11 have been working together quite a long time.
- 12 Let's just say it hasn't been politic to
- 13 throw bouquets to Mr. Wood on the subject of gas
- 14 visavis the other issues we face, but we have a
- pretty good idea of what they do and how they do
- 16 it at FERC in the gas area, and we have actually
- 17 quietly been facilitating each other's review of
- 18 things.
- So I feel pretty good about that part of
- 20 the regulatory process, lest you think we sit
- 21 here, as I said, in splendid isolation. A little
- 22 tidbit, anyway, for folks working together. And
- 23 let me just go on to say that I also work with the
- 24 Board of Governors on the subject of energy, and
- 25 LNG in Mexico was the key subject of our recent

- 1 annual meeting here a few weeks ago.
- 2 And while I'm the Chairman of the U.S.
- 3 Governor's, of the energy work table, the new
- 4 governor from Mexico is from Baja, so I expect
- 5 we'll be talking about a lot of LNG issues over
- 6 the next year.
- 7 So we're tying to follow you all as best
- 8 we can. And your list looks very accurate. All
- 9 right. Mr. Mark Skowronski.
- 10 MR. SKOWRONSKI: Good afternoon,
- 11 Commissioners. Before I commence I too would like
- 12 to add kudos to the staff. I think it' an
- 13 outstanding compilation, collation and
- interpretation of voluminous facts, information
- 15 and figures. You guys have good people working
- 16 for you.
- 17 However, having said that, I'd like to
- 18 make comments on two items. Number one is fuel
- 19 diversity. I think fuel diversity is a very
- 20 important concept, very important attribute that
- 21 is of value to the people and to the ratepayers.
- The concept of fuel diversity is rarely
- 23 quantified. We talk about it, but we really don't
- 24 put a value on it. If you don't put a value on an
- 25 attribute it basically is not there.

1 I think an analogous situation would be

- 2 having all the generation assets, the bulk of the
- 3 generation assets, owned by a single individual or
- 4 company, and common sense tells us that's not a
- 5 very good idea. But basically we're a single fuel
- 6 state, where the bulk of the assets are basically
- 7 powered by natural gas.
- 8 I would urge the Commission to delve a
- 9 little bit deeper, and perhaps try to quantify the
- 10 concept of fuel diversity. Senate Bill 1078, that
- 11 was a driving factor, but again there is not
- 12 quantification.
- In the report it rates a topic in the
- 14 agenda, but there's only three sentences relegated
- 15 to fuel diversity, and I think we could expand on
- 16 that a little bit.
- 17 The second item is societal effects or
- 18 impacts. Again, from a renewable standpoint, I've
- been in the renewable business for about 20 years.
- 20 It's something you always run up the flagpole and
- 21 people say "great, this is keeping jobs in
- 22 California."
- 23 If you build a 500 megawatt combined
- 24 cycle you're talking about a \$600 million capital
- 25 expenditure. If you build a 500 megawatt solar or

1 geothermal or biomass, you're talking usually in

- 2 the multi billions of dollars.
- 3 And the construction jobs are up three
- 4 or four times compared to combined cycle. The
- 5 price increase, of course, is because you're
- 6 amortizing or capitalizing the fuel, and you're
- 7 not exporting dollars to Texas, you're not
- 8 exporting dollars to Canada.
- 9 This has value. And while the report
- 10 does discuss the number of jobs it doesn't
- 11 differentiate between technologies. And this
- 12 report, this effort on the IEP I think would be an
- appropriate vehicle to try and ascertain and try
- 14 to determine a quantified value, both for fuel
- 15 diversity, and also for the societal impacts that
- 16 are good for renewable energy. Thank you very
- much.
- 18 COMMISSIONER BOYD: Thank you.
- 19 Comments? Questions? Okay, thank you very much.
- 20 i have no more blue cards, indicating I don't know
- 21 anyone who would like to address the group. I
- 22 have one question for Mr. Pak, but I'll save that.
- 23 First to see if there's anyone in the
- 24 audience who didn't get a chance to speak and
- 25 would like to do so, or wants to circle back to

- 1 some item that we talked about?
- Well, okay, Mr. Pak, can I ask you a
- 3 question kind of following on the discussion about
- 4 LNG and Mr. Hampton's presentation. I asked him
- 5 about Alaskan LNG, and he gave us his opinion
- 6 about north slope gas becoming LNG and its
- 7 viewpoint in the market.
- 8 But I happen to know, from being in
- 9 Alaska recently at a meeting that the folks up
- 10 there called, that Sempra happened to be there and
- 11 seemed very interested in Alaska LNG. In fact, I
- 12 read in the press that you're seriously talking
- 13 contractual arrangements with some of the folks
- 14 proposing LNG.
- 15 And I just wondered what you could
- 16 discuss publicly are your views on that subject.
- 17 I kind of like buying commodities from other
- 18 states, so Alaska LNG's make sense to me. And I
- 19 can't speak for other Commissioners, but I'm
- 20 keenly interested in LNG.
- 21 I'm selfish, I want gas for California,
- I don't care if it comes by land or by sea, so I'm
- 23 looking at everything at the moment.
- MR. PAK: As Sempra has developed the
- 25 Costa Azul project, when we were originally

1 partnered with CMS I think there was a lot of

- 2 enthusiasm that the project could go forward, but
- 3 as CMS fell out of the project there was some
- 4 concern whether Sempra, who is, if you take a look
- 5 at the people on the list that Mr. Eisenman laid
- 6 out -- Shell, Chevron, Texaco, Conoco, Phillips --
- 7 these are companies that are several orders of
- 8 magnitude larger than us, and there was a lot of
- 9 speculation as to whether Sempra could continue to
- 10 go forward.
- Being the furthest along in the
- 12 permitting process in Mexico, and there are
- 13 several, all of independent and equal importance.
- 14 Being the first along in all of the processes,
- 15 having captured the three critical permits, we
- sort of find ourselves sort of in the role of the
- 17 emerging prom queen, and everyone has come to talk
- 18 to us about delivery of their supplies into our
- 19 facility.
- The Alaskans have visited Sempra, they
- 21 do seem committed to making supplies available in
- 22 a time frame consistent with the development and
- 23 operation of our facility. We have not yet
- 24 selected who will be the supplier for that portion
- of the terminal that we're going to retain under

- 1 our control.
- 2 At this point I can't say that they are
- 3 the furthest along. I think we have a lot of
- 4 doubts, and Mr. Hampton has laid some of those
- 5 out, as to whether they can actually deliver in
- 6 the time frames that are consistent with our
- 7 project, and in the quantities that are consistent
- 8 with our project, as well as the cost.
- 9 However, as I understand it, the
- 10 Governor has made the delivery of LNG to the west
- 11 coast a priority project for his staff and his
- 12 agencies. In that light we're certainly open to
- 13 talking to them.
- 14 Those talks continue, but at the present
- 15 time I can't say that we would, they would be in
- 16 first place-- they may not be in last place -- but
- 17 I think there is, as Mr. Hampton pointed out,
- 18 considerable doubt as to whether they could
- 19 actually accomplish what they have set out to
- 20 accomplish.
- 21 COMMISSIONER BOYD: I appreciate that.
- 22 Let me ask you one thing more about your project,
- 23 since the question of long-term contracts has
- 24 entered the discussion here several times, and the
- 25 historical need for projects like this for long-

- 1 term contracts, for the financing.
- In my mind, if I'm not mistaken, your
- 3 project is rather novel, I mean it's almost rent
- 4 to own. You're building a facility, you're
- 5 looking for people to run gas through it, and
- 6 you're not looking for long-term contracts,
- 7 necessarily. And you've been able to finance your
- 8 facility.
- 9 MR. PAK: That's right. Because of
- 10 Sempra's history and the scope of our business,
- 11 we're not a full value chain LNG developer or
- 12 producer. We have a somewhat different business
- model than you might see from a Shell or a
- 14 Marathon or a Conoco Phillips.
- We see ourselves as infrastructure
- 16 developers. And with respect to LNG projects, the
- 17 developer is a strategic infrastructure. We
- 18 facilitate the movement and arrangement, supply
- and purchase agreements, between upstream
- developers and markets.
- 21 We will participate to some extent on
- 22 both ends of that chain, but we're not fully
- 23 invested beyond the terminal itself.
- So, in terms of the contracts that we
- 25 would like to see, I think we are looking for

```
1 longer term agreements. One of the things that
```

- 2 has come up -- and I think this applies equally to
- 3 electricity as it does to the gas markets --
- 4 liquidity is awfully important.
- 5 Not just because it means that in the
- 6 event of one of our purchasers or users of the
- 7 terminal doesn't take full supply or doesn't
- 8 utilize the full extent of the capacity they've
- 9 committed to, but it allows people who do make
- 10 commitments to lay off the capacity that they've
- 11 -- or the supplies that they've engaged.
- So, to that extent there is a very
- direct tradeoff between the length of contracts
- that you'd like to see and the vibrancy of a spot
- 15 market. So on the electric side we are looking
- 16 for ten year capacity agreements, because the spot
- 17 market in electricity in California is relatively
- 18 thin and illiquid.
- On the gas side we see the potential for
- 20 greater liquidity than we're currently seeing in
- 21 the electricity market. So we will consider
- 22 shorter term agreements.
- But because of the business model we're
- 24 running, we're somewhat saying what about getting
- 25 longer term contracts, and longer term

1 commitments, than I think you've heard from the

- 2 others.
- 3 COMMISSIONER BOYD: Thank you very much.
- 4 I would just note that I think the Governor of
- 5 Alaska has himself in a tough position. As
- 6 Senator he much favored the on-land route for gas
- 7 pipeline, and is very much aligned with the
- 8 companies who favor that.
- 9 As Governor, he's faced with a 68
- 10 percent vote from the people of Alaska to create
- 11 an LNG authority, and created a bond issue of an
- 12 incredible amount of money to facilitate that
- 13 process. So they have a lot going for them, and
- it makes it rather fascinating.
- 15 And they thought so much of the project
- 16 that, not at California taxpayers expense, they
- 17 asked to talk to some of us. It's kind of
- 18 interesting. Anyway, I'm just killing time here.
- 19 I have no more blue cards. No more hands in the
- 20 audience. Time is up. We're not quite going to
- 21 make it to 3:00.
- I want to thank the staff, Karen Griffin
- 23 in particular, for all the work that they put into
- 24 this, I don't know, 20 pound monster I've been
- 25 carrying around for a few days. We will be back

here tomorrow morning for the second day of this announced two day hearing. I'm not sure anyone else will be here tomorrow, but we will be here to receive those people who indicated they wanted to testify on the second day. So I thank you all. Thank you very much for your testimony. There was really good, frank remarks today, and we'll see you in the future. (Thereupon, at 2;55 p.m. the workshop was adjourned.)

CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Workshop; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 3rd day of September, 2003.